

RRS-046

Reusable Reentry Satellite (RRS) System Design Study

System Cost Estimates Document

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TABLE OF CONTENTS

SYSTEM COST ESTIMATES DOCUMENT

TABLE OF CONTENTS	i
LIST OF FIGURES	ii
LIST OF TABLES	ii
1.0 INTRODUCTION	1
2.0 REQUIREMENTS	1
3.0 PROGRAMMATIC ISSUES	2
3.1 Public Safety	2
3.2 Payload Size	2
4.0 COST ESTIMATING	3
4.1 Relationships/Procedures	3
4.2 Assumptions	4
4.2.1 Programmatic	4
4.2.2 Economic Assumptions	4
4.2.3 Operational Assumptions	5
5.0 RISK ANALYSIS/ASSESSMENT	5
6.0 COST ANALYSIS	6
6.1 Development Cost	6
6.1.1 Item Breakout	7
6.1.2 Cost Breakout	7
6.1.3 PRICE H Analysis	7
6.1.3.1 Schedule	8
6.1.3.2 PRICE H Data Base	8
6.1.3.3 Cost Summaries	8
6.1.3.4 Program Costs	9
6.2 Operations Costs	9
7.0 SUMMARY	10
FIGURES AND TABLES	11
APPENDICES: PRICE H Runs 3 through 11	40

LIST OF FIGURES

Number	Title
1	Price H Estimated Delivery Schedule
2	Price H Based Master Schedule
3	RRS Program Master Schedule

LIST OF TABLES

1	RRS Subsystem Distribution
2	RRS Item Definitions
3	RRS Subsystem Quantities
4	PRICE H Run Summary
5	Cost Item Definitions
6	Price H Quantity and Complexity
7	Mass Properties Summary
8	Phase H Main Module Summary
9	PRICE H Deployed Module (Control Assembly) Summary
10	PRICE H Deployed Module (Propulsion Assembly) Summary
11	PRICE H Payload Module Summary
12	PRICE H System Summary
13	GNC I&T Estimation
14	Cost Summary for Run #5
15	Propulsion Cost Assessment
16	Propulsion Engineering Assessment
17	Cost Summary for Run #3
18	Cost Summary for Run #4
19	Cost Summary for Run #16
20	Overall Cost Summary
21	Software Sizing/Cost Estimate
22	Cost Summary by Vehicle Function
23	Cost Summary by Program Function
24	RRS Operations and Support Cost Estimate
25	System Cost Summary

SYSTEM COST ESTIMATES DOCUMENT

1.0 INTRODUCTION

The RRS program was initiated to provide life science investigators relatively inexpensive, frequent access to space for extended periods of time with eventual satellite recovery on earth. The RRS will provide an on-orbit laboratory for research on biological and material processes, be launched from a number of expendable launch vehicles, and operate in Low-Altitude Earth Orbit (LEO) as a free-flying unmanned laboratory. SAIC's design will provide independent atmospheric reentry and soft landing in the continental U.S., orbit for a maximum of 60 days, and will sustain three flights per year for 10 years. Our Reusable Reentry Vehicle (RRV) will be 3-axis stabilized with artificial gravity up to 1.5g's, be rugged and easily maintainable, and have a modular design to accommodate a satellite bus and separate modular payloads (e.g., rodent module, general biological module, ESA microgravity botany facility, general botany module).

The purpose of this System Cost Estimate Document is to provide a Life Cycle Cost Estimate (LCCE) for a NASA Reuseable Reentry Satellite (RRS) Program using SAIC's RRS design. The estimate includes development, procurement, and 10 years of operations and support (O&S) costs for NASA's RRS program. The estimate does not include costs for other agencies which may track or interface with the RRS program (e.g., Air Force tracking agencies or individual RRS experimenters involved with special payload modules (PMs)). The life cycle cost estimate extends over the 10 year operation and support period FY99-2008.

The PRICE H data used as the basis for this analysis was generated by Co\$t, Inc., a Fairchild Space subcontractor, based upon information generated by SAIC/Fairchild. This report has been prepared by SAIC based upon that data base.

2.0 REQUIREMENTS

This document was generated in response to the requirements for a preliminary cost estimate as defined in the RRS Statement of Work (SOW; Paragraphs 3.2.7 and 3.2.8) and DRL-T-2238 (Item 03; DRD MF-165T). These requirements include:

- a. RRV Development. Prepare a preliminary cost estimate for the development, fabrication, and test of:
 - (1) the first RRS vehicle with appropriate spares, launch adapters, GSE, and recovery handling equipment.
 - (2) a second flight unit and spares.

- b. RM Development. Prepare a preliminary cost estimate for the development, fabrication, and test of:
 - (1) the RM with appropriate spares and GSE.
 - (2) the GCEM.
- c. Integration. Determine the timelines for integration of the RM to the RRS vehicle and estimate the associated cost.
- d. Refurbishment. Determine the timelines and schedules associated with refurbishment of the RRS vehicle and RM for the next flight.
 - (1) Estimate the appropriate level of system and subsystem spares and material cost for refurbishment
 - (2) Estimate the total associated cost of refurbishment
 - (3) Estimate the possible effects associated with learning curves on the project cost over a 10 year period.

3.0 PROGRAMMATIC ISSUES

There are two key issues which drive the cost of the RRS program, the level of redundancy required to achieve the necessary degree of fail operational capability to land within the CONUS and the size of the payload.

3.1 Public Safety

The issue of assured public safety is discussed in detail in the Final Report and is a redundancy, and therefore, investment cost, driver for the program. However, the fail operational nature of the design also mitigates the refurbishment (and potentially part screening level) concerns which are based primarily upon catastrophic single point failures. Therefore, the basic issue becomes one of initial versus life cycle cost. The best example of this is probably the use of liquid propulsion. Although somewhat more expensive in the beginning, a critical consideration for a non-reusable vehicle, the payload flexibility and low reuse cost clearly are more advantageous over the life cycle for a reusable vehicle.

3.2 Payload Size

One of the key issues addresses in the cost analyses was the possibility of achieving cost savings via the use of the newer, smaller commercial boosters. However, the basic 18 rodent, 60 day requirement drove a 1000 pound class payload which in turn drove the vehicle size. To assess the smaller vehicle approach, the basic design was scaled down to several smaller sizes as

discussed in the Final Report, the smallest being roughly the size required for a Taurus launch. This analysis resulted in the following observations:

- The smaller booster is cost inefficient on a per unit payload basis. For example, three Taurus launches (approximately \$81M) are required to achieve the same number of rodent-days that a single RRS Delta launch (approximately \$45M) can provide. Furthermore, since the Delta has a dual launch capability for the orbits accessible to the Taurus, the Taurus is effectively over 3 times more expensive than the Delta.
- The smaller vehicle required for a Taurus class launch will not easily accommodate off-the shelf equipment, resulting in less redundancy (a public safety issue) and/or the need to develop more compact components at higher development cost and cost/schedule risk.

4.0 COST ESTIMATING

4.1 Relationships/Procedures

SAIC's mid-term cost estimate for the RRS Life Cycle Costs used SAIC's Integrated Cost Model (ICM) which was developed in 1984-85, with annual updates, to estimate space systems. The ICM was built from various data sources including many point design estimates of different satellite and space systems performed by Boeing's Parametric Cost Model for acquisition costs. In addition, modifications have included adapting Cost Estimating Relationships (CERs) from the Unmanned Spacecraft Cost Model 5th and 6th Editions, Office of Secretary of Defense's (OSD's) Space Bus Cost Model, OSD's Space Sensor Cost Model, and various vendor actuals or quotes for specific subsystem point designs. The ICM is primarily a weight-based parametric cost estimating cost model with the capability of accepting analogy or vendor quote estimates at the subsystem level and "integrating" them with historical subsystem and system cost factors for assembly, integration, test, and documentation.

For the final report, SAIC used the GE(RCA) Price H cost model to estimate the cost of the development and manufacture of the RRS at the detailed level needed to provide the required cost breakout. The inputs were provided at the unit level and basic cost runs made for the individual unit, single flight vehicle and 2 flight vehicle cases. 50% spares were then added to the 2 vehicle case to approximate the 2 vehicle operating case, and a four vehicle run made to investigate the cost increment for a few additional vehicles.

4.2 Assumptions

4.2.1 Programmatic

The following program assumptions have been made and considered in this preliminary life cycle cost estimate:

- a. Standard off-the-shelf (OTS) components and subsystems have been used to the greatest extent possible in designing the RRV and PM.
- b. Surface landing at White Sands Missile Range (WSMR) with a parachute has been costed.
- c. A Post-Recovery Facility and equipment at NASA's White Sands Test Facility (WSTF) on WSMR will be leased for mission use.
- d. The Rodent Module (RM) mission is representative (and the most complex, stressing and costly mission) of other Experiment Module (EM) missions in terms of costs and has been used for estimating all payload missions.
- e. RRS missions will be launched using a Delta ELV. A 94% launch reliability factor based on experience has been used for the Delta ELV which translates into a requirement for 33 launches and 5 RRSs plus subsystem spares to achieve 30 RRS missions. Two RRSs and spare subsystems would be procured in the acquisition phase and three RRSs during the O&S phase.
- f. There will be both dedicated and contracted (leased) personnel and equipment for RRS operations and support activities at WSMR.

4.2.2 Economic Assumptions

The following economic assumptions were used to prepare this life cycle cost estimate:

- a. This estimate is costed in constant fiscal year 1990 dollars (FY90\$).
- b. The first RRS unit (RRS #1) is assumed to be a developmental unit that will be paid for with R&D funds.
- c. The second RRS unit (RRS #2) and replacements/spares are assumed to be procured with acquisition funds. Any follow-on RRS units would be bought in the O&S phase.

- d. A 100% production learning curve is assumed for all subsystems and vendor cost quotes because of the small quantities of RRSs planned and to provide a conservative estimate for NASA planning and budgeting purposes.
- e. Subsystem spares are counted in the acquisition estimate.
- f. All contracted or leased personnel are assumed to cost an average of \$120,000 (loaded cost rate) per manyear. This cost represents an average rate for an engineer, skilled manufacturer, or experienced satellite mission operator/controller.
- g. Delta launch costs include launch assembly, integration, test, and launch personnel.

4.2.3 Operational Assumptions

The following operational assumptions were made for this cost estimate:

- a. The O&S life cycle is 10 years starting with first operational launch at the start of FY99 and ending in FY2008. All launch costs are accounted for in the O&S estimate.
- b. RRV mission operations and support will be performed by contractor personnel.
- c. Payload module operations and support will be performed by RRS contractor personnel.
- d. The Eastern Test Range (ETR) and Western Test Range (WTR) are assumed as launch sites. WSMR is the assumed landing site.
- e. All ELV launches are assumed to be dedicated to RRS.
- f. Replacement/refurbishment time is assumed to require 60 days.
- g. RRS/ELV integration and test is assumed to require 30 days after the first two launches.

5.0 RISK ANALYSIS/ASSESSMENT

The assessment of the development was discussed in the Final Review and presented in detail in the Payload Hazard Analysis. This review assessed each component of each subsystem in terms of

the development status, previous use, potential vendor, and development confidence. Although some new components were identified, the components were essentially all a modified version of proven hardware. This, in conjunction with the high complexity factors used in the PRICE H model, combine to make the overall cost risk in the low-medium category.

6.0 COST ANALYSIS

This analysis was performed in two parts, the development of the RRS and the cost of operations. The preliminary development cost reported at mid-term have been updated using the GE PRICE H model. The operating costs are essentially unchanged from the mid-term estimates.

6.1 Development Cost

The RRS is composed (Table 1) of 10 subsystems distributed among the vehicle (RRV), which is made up of the main and deployed modules, the Rodent Module (referred to as the Payload Module in this report), and a payload adapter for the RRV/booster interface.

The basic program (Table 2) includes two flight vehicles and payload modules to provide the initial and 2nd unit estimate, an Engineering Test Vehicle (ETV) for thermal/structural and booster interface testing, vehicle and payload emulators to allow independent parallel development, a Ground Control Experiment Module, multiple payload adapter units for various functions and appropriate spares for refurbishment and schedule protection. The required subsystem quantities are shown in Table 3.

A total of 11 PRICE H runs (Table 4) were made, 2 for modeling verification and 9 production runs to develop the analytical data base. All runs were made in the development mode since there are too few vehicles to justify the production tooling required to achieve the savings estimated in the production mode. Production runs were made with both unconstrained (to validate the schedule presented in the Manufacturing Plan) and defined. The analysis in this report was done using the unconstrained (PRICE H calculated) schedule since the was shorter and less costly for all items. The raw PRICE H output for the production runs is provided in the appendices.

Three basic run configurations were used in this analysis. The single item run (#5) was made to establish the basic cost of subsystem development. A run (#3, #8) establishing the cost through the first flight vehicle (including the ETV, emulators, etc.) was made to establish the cost of the initial flight vehicle. A run (#4, #9) with a second vehicle was added to establish the cost of the second flight vehicle. A run (#6, #10) with the two flight vehicles and spares was made to establish the

spares and refurbishment cost. A fourth run (#7, #11) was also made for the delivery of four vehicles with spares to determine if doubling the buy would create significant per unit cost savings.

6.1.1 Item Breakout

Development and unit cost have been estimated at the subsystem hardware level within each module (Main, Deployed, Payload) and summed to obtain the basic vehicle and Rodent Module cost (Table 5). The Main and Payload Modules, the control and propulsion assemblies and the GNC subsystem are the basic level of integration and test. The two assemblies and the GNC are then integrated to form the Deployed Module, and then the Main and Deployed Modules to form the RRV. The cost of integrating the Payload Module into the RRV's Main Module is also estimated.

6.1.2 Cost Breakout

DRD-MF-165T specified 6 cost categories to be used in reporting this analysis. These categories represent groupings of the basic PRICE H engineering and manufacturing data output. The groupings used in preparing this report are as follows:

- a. Development Cost. The sum of the PRICE H (Engineering) drafting and design cost, excluding I&T.
- b. Systems Engineering Costs. The sum of the PRICE H (Engineering) system and project management (reliability, etc.) cost elements, excluding I&T.
- c. Documentation Costs. The PRICE H (Engineering) data cost element.
- d. Fabrication Costs. The PRICE H (Manufacturing) prototype cost element, excluding I&T.
- e. Testing Cost. The sum of the PRICE H drafting, design, systems, project management, and prototype cost elements for I&T.
- f. GSE Costs. The PRICE H (Manufacturing) tool-test equipment cost element.

6.1.3 PRICE H Analysis

The prime cost drivers (quantity, mass and complexity) of the PRICE H estimation are summarized in Tables 6 and 7. The manufacturing (electrical, mechanical) and engineering complexities are given for each item in Table 6. All estimates are based upon space quality hardware (see detailed appendix

data; platform value 2.0). The mass properties used in the estimate are compared with the final report mass properties in Table 7 at the module subsystem level. All computations are based upon dry weight without margin, with the distribution of the margins (%Mar) used in determining the launch weight shown as a percent of subsystem weight.

6.1.3.1 Schedule

Part of the uniqueness of the SAIC design is the high degree of modularity and the resulting parallel processing. Although this aspect of the program was taken into account in establishing the master schedule presented in the Manufacturing Plan, the unconstrained PRICE H computed schedule was viewed as an opportunity for an independent assessment of the projected schedule. Figure 1 presents the duration of each cost element, identifying the critical milestones (first unit, first flight vehicle, second flight vehicle and spares), as well as the quantities to be delivered at each milestone. Figure 2 presents the same information in the probable start/deliver position. Since the Figure 2 flow is a reasonable approximation of the master schedule (Figure 3), the unconstrained model was used as most representative of the probable program.

6.1.3.2 PRICE H Data Base

Tables 8 through 12 present a summary of the primary PRICE H data which was assessed in this analysis. The data is organized by module and includes an overall system summary. The development, first and second flight unit, and spares cost is presented at the subsystem level. Note that the cost of the first vehicle is significantly greater since the ETV, emulators, etc, are considered part of the initial vehicle overall development cost.

Subsequent to the PRICE H runs, the refurbishment philosophy for the propulsion assembly on the DM was changed. The initial intent was to clean the assembly for reflight within the required 60 days. However, because of the safety critical nature of the propulsion subsystem, the decision was made to spare the assembly for use in the refurbishment, allowing a less time driven refurbishment. Since the additional acquisition data already existed from Run 7, the results were combined in lieu of additional model runs. A similar estimation for the GNC I&T (Table 13) was made to correct a data entry error.

6.1.3.3 Cost Summaries

Tables 14, 17, 18 and 19 present a summary of the Run 5 (first unit), Run 3 (through first flight vehicle), Run 4 (first and second flight units, and Run 6 (the two flight units and spares) broken out by subsystem and cost category. Most of the subsystems could be cross-checked against available hardware for

cost consistency. However, the propulsion system represented an integration of available components rather than a specific subsystem. Therefore, an independent assessment (Table 15) of the probable cost of the subsystem was made and compared to the PRICE H data (Table 16). The only significant difference, fabrication, was higher for PRICE H since more than a single system was being procured and the definition of 90% new drove the test cost. Table 20 summarizes the overall cost by subsystem in a single tabulation.

6.1.3.4 Program Costs

The above cost represent the only the hardware (PRICE H) element of the total program cost. Several approaches (e.g., PRICE S) were considered for software cost estimation before the technique presented by R. Wong in "Space Mission Analysis and Design" was selected as providing a reasonable estimate without significant sensitivity to design details. Estimates (Table 21) were made for both the RRV and RM and included in the overall vehicle and program function summaries (Tables 22 and 23)

6.2 Operations Costs

Operations and support costs were generated by assessing each RRS subsystem's requirements to be replaced, refurbished, or reused after inspection and testing following each mission. The manpower and time required to operate and support each mission were estimated and multiplied by \$120,000 per manyear. Leasing costs for mission operation and recovery equipment and facilities were also estimated. Finally, system level costs to support the missions and support functions were estimated. The RRS O&S estimate assumes that 34 S-II ELVs and 6 RRSs (or 33 ELVs and 5 RRSs for the Delta ELV option) are required to meet 30 successful RRS mission launches over a 10-year period.

An RRS operations and support cost model was constructed to estimate the cost of 30 successful RRS missions over 10 years. First an assessment of each RRS subsystem was made to determine whether that subsystem would require replacement, refurbishment, or simply inspection, test and reuse. The estimates in the T1 replacement ("T1 REPLAC") column are the ICM production T1 costs used to generate the acquisition estimate. If a subsystem must be replaced each mission (e.g., the hydrazine or heat shield) then this T1 value is used along with a 100% learning curve and the total life cycle quantity required (qty/mission times number of missions). The model was not rerun with the PRICE H data since the variation between the basic model values were within the probable error of the computations.

Costs to lease a tracking and data network (\$20,000/mission), ground control system (\$50K/msn) and recovery equipment and facilities (\$100K/msn) are our best estimates at this time.

Personnel costs per mission were made by estimating the number of personnel required for each task times \$120,000 average manyear cost. Forty manmonths/mission were estimated to prepare for mission operations, operate during the mission, and perform post-mission analysis. Experiment module operators (i.e., the scientists responsible for the experiments) are not costed as expenses to NASA. Twenty-four manmonths per mission were estimated for payload module operations and support. Twenty personnel for 2 weeks (10 manmonths) were estimated for RRS landing recovery, post-recovery facility efforts, and RRV deactivation tasks. Launch vehicle personnel are included in Delta launch cost estimates.

The following factors (as a percentage of total operation and support costs less ELV launch costs) for system level expenses: The operating and support cost estimate is presented in Table 24 by RRSs, launch, hardware & equipment ("HW/EQUIP"), personnel & lease, and total costs with for the Delta. All costs are provided in millions of constant 1990 dollars (FY90\$M).

System Engineering/Program Management (SE/PM)	10%
Integration & Assembly	10%
Test Activities	10%
Training O&S Personnel	5%

7.0 SUMMARY

In summary (Table 25), the proven Delta/Atlas boosters are cost competitive with the newer, smaller commercial boosters if viewed on a total program requirements basis. A total cost of about \$200M for the development and production of 2 flight vehicles is split roughly 50-50 between development and production and the \$50M per vehicle cost compares reasonably with recent GPS IIR (a comparable sized vehicle) experience. When viewed on a Life Cycle basis, the cost of the 4 vehicle program is less than a 5% increase and would appear to be a good investment against unforeseen booster failure, especially if dual launches are used to decrease the overall program cost.

FIGURES AND TABLES

TABLE 1: RRS SUBSYSTEM DISTRIBUTION

SUBSYS	MAIN MODULE	DEPL MODULE	PAYL MODULE	PAYL ADPT
Propul	---	De-orbit Attitude Ctl	---	Gas Depl
GNC	GPS Receiver	Control Sys GPS System Magnetic Sys Scanner Sys	---	---
TT&C	Data Intf SOH Tlm	Comm/CmdDec SOH Tlm Data Handl Memory	Data Module SOH Tlm Camera Sys	Bstr Tlm
Power	Conv/Control Batteries	Conv/Cont Batteries Solar Array	Conv/Cont Lighting	Depl Ctl
Reentry	Heat Shield	---	---	---
Thermal	Radiator	Passive	HE/R/P/Ctl	---
Struct	Primary	Primary Astromast	Press Vsl Cage Assy	Primary RRV Intf
ECLSS	Storage	---	ECLSS	---
Recovery	---	Parachute Depl Mech	---	---
Harness	P,C,&D	P,C,&D	P,C,&D	P,C,&D

P,C,&D = power, control, and data

TABLE 2: RRS ITEM DEFINITIONS

Quantity: 2 Flight Reusable Reentry Vehicles (RRV)
Consisting of 1 Main Module (MM) and 1 Deployed Module (DM)

1 Engineering Test Vehicle (ETV)
Selected flight quality subsystems + Thermal/Mass models (TMM)

1 Vehicle Emulator (VE)
Complete working/tested MM model except for selected subsystems.
Full interface support to PM.

2 Flight Payload Modules (PM)
Consisting of 1 Support Module (SM) and 1 Experiment Module (EM)

1 Payload Module Emulator
Complete working/tested SM model except for selected subsystems.
Full interface, mass and thermal emulation.

1 Ground Control Experiment Module
Consisting of 1 VE and 1 non-flight PM (Ground Test Module (GTM))

Refurbishment/Spares
Concept is to have sufficient spares to pull and replace any item
subject to test failure and/or needing replacement following
flight (e.g., heat shield). Redundant items are dual spared.

3 Flight Payload Adapters

6 Partial Payload Adapters
Support structure and RRV interface only. 2 for factory test, 2
for field (ETV/launch, recovery) operations, 2 for VEs.

Quality: F - flight C - Complete working and tested model
P - Partial prototype B - Brassboard E - Engineering Model
-- Not applicable

TABLE 3: RRS SUBSYSTEM QUANTITIES

SUBS	2FLT VEH		ENG TV			VE	2FLT PM		PME	GCEM		REF/SPR			OTHER
	MM	DM	MM	DM	PME	M/DM	SM	EM	S/EM	VE	PM	MM	DM	PM	
Prop	--	2F	--	TMM	--	--	--	--	--	--	--	--	1F*A	--	--
GNC	2F	2F	TMM	TMM	--	1P*D	--	--	--	1P*D	--	1F	1F 1P*D	--	1C
TT&C	2F	2F	TMM	TMM	TMM	1P*G	2F	2F	1P*H	1P*G	1C	1F	1F 1P*G	1F 1P*H	1P*G
Powr	2F	2F	--	TMM	TMM	1P*J	2F	2F	TMM	1P*J	1C	1F 1P*J	1F	1F	1B
Rtry	2F	--	1P*K	--	--	--	--	--	--	--	--	2F*L	--	--	--
Ther	2F	2F	1C	TMM	1P*M	1P*N	2F	--	1P*M	1P*N	1C	1F 1P*N	--	1F 1P*M	--
Strc	2F	2F	1F	1F	1P*R	1P*S	2F	2F	1P*R	1P*S	1C	--	--	--	--
Amst	--	6F	--	3C	--	--	--	--	--	--	--	--	3F	--	1C
ECLS	2F	--	TMM	--	1P*T	1C	2F	--	1P*T	1C	1C	1F	--	1F	--
Rcvy	--	2F	--	1F	--	--	--	--	--	--	--	--	2F*L	--	--
Harn	2F	2F	1P*U	1P*U	1P*U	1P*W	2F	2F	1P*X	1P*W	1C	1F	1F	1F	--

- A - 0.2 partial. Only valves and thrusters are spared.
- D - 0.2 partial for data interface integrity.
- G - 0.8 partial to provide full RRV data handling and commanding capability.
- H - 0.3 partial to provide full PM data handling and command interface.
- J - 0.9 partial of MM power system to replicate actual system performance.
- K - 0.9 partial. Flight heat shield less ESM thermal coating.
- L - New heat shield and parachute each flight; 3 flights assumed.
- M - 0.8 partial to replicate PM thermal load and operation.
- N - 0.8 partial to provide MM equivalent heat removal capacity.
- R - SM structure with TMMs to provide equivalent strength, mass, and balance.
- S - 0.8 partial MM structure for VEs. No Astromast and interlock elements.
- T - 0.3 partial to support RRV/PM interface tests.
- U - 0.2 partial active harness for power/data with full mass simulation.
- W - 0.9 partial MM harness. No GNC, partial power.
- X - 0.4 partial SM harness to provide interface support.

TABLE 4: PRICE H RUN SUMMARY

=====

Individual Subsystem Development Cost

Run 5 R&D Only; All quantities set to 1 for initial cost per unit

Unconstrained Schedule

PRICE H selects optimum schedule for lowest cost

Run 3	R&D Only	ETV	partial protos	FV-1	
Run 4	R&D Only	ETV	partial protos	FV-1,2	
Run 6	R&D Only	ETV	partial protos	FV-1,2	spares
Run 7	R&D Only	ETV	partial protos	FV-1,2.3.4	spares

36 Month Schedule Defined

PRICE H penalized cost for unnecessarily long schedule

Run 8	R&D Only	ETV	partial protos	FV-1	
Run 9	R&D Only	ETV	partial protos	FV-1,2	
Run 10	R&D Only	ETV	partial protos	FV-1,2	spares
Run 11	R&D Only	ETV	partial protos	FV-1,2.3.4	spares

=====

Definitions

R&D Only	Insufficient quantity for valid production savings
ETV	Engineering Test Vehicle for selected tests
Partial protos	Partial prototypes for selected testing
FV	Number of Flight Vehicles
	1 First vehicle estimate
	1,2 Delta provides second vehicle estimate
	1,2,3,4 Quantity cost check
Spares	Spares to support manufacturing/refurbishment plan

=====

NOTE: Runs 1 and 2 were pre-production test runs

TABLE 5: COST ITEM DEFINITIONS

Item	Definition
=====	
RRV MM	Reusable Reentry Vehicle Main Module
Structure	MM structure including crushable nose
Power	MM batteries and power distribution
Harness	MM harness
Thermal	MM active thermal control
HShield	MM heat shield
TT&C	MM data handling
ECLSS	MM expendables storage for RM
I&T	MM integration and test

RRV DM	Reusable Reentry Vehicle Deployed Module
Structure	Control Subassembly structure
Power	DM batteries, solar array and power distribution
Harness	DM harness
Thermal	DM passive thermal
TT&C	DM telemetry (data handling and transceiver)
RcvRys	DM recovery subsystem
AMast	DM deployable mast (Astromast)
I&T(nGNC)	DM integration and test without GNC/Propulsion subsystems
GNC Ctl	GNC subsystem without GPS
GPS	GPS components
Ant	GPS antenna
I&T	Integration and test of GNC
Prop Str	Propulsion Subassembly structure
Prop	Propulsion components
I&T	Integration and test of Propulsion Subassembly
I&T	DM integration and test

RRV I&T	MM/DM integration and test (90% of MM/DM/adaptor I&T)

RRV Tot	RRV Total Cost
=====	
RM	Rodent Module
EM	Experiment Module (cages and service)
SM	Support Module components
PV	Support Module pressure Vessel
RM I&T	RM integration and test

RM Tot	RM Total Cost
=====	
MM/RM I&T	Integration of RM into the RRV
=====	
Adapter	RRV to Launch Vehicle (LV) adapter
=====	
LV I&T	RRV/adaptor integration and test (10% of MM/DM/Adapter I&T)
=====	
RRS Total	Total cost of RRS
=====	

TABLE 6: PRICE H QUANTITY AND COMPLEXITY

Quantity delivered by PRICE H run.

	Quantity		Complexity		
	Runs 3/4/6	Total	Elect Dsg	Mech Dsg	Eng Dsg
RRV MM					
Struct	3.6/1.0/---	4.6		7.682	1.200
Power	4.2/1.0/1.0	6.2	10.057	7.810	1.000
Harness	3.0/1.0/1.0	5.0	10.057	6.890	0.900
Thermal	3.6/1.0/1.0	5.6	9.800	7.200	1.000
HShield	1.9/1.0/2.0	4.9		7.682	1.000
TT&C	3.7/1.0/2.0	6.7	10.705	7.767	0.300
ECLSS	3.1/1.0/1.0	5.1		7.200	0.900
I&T	2.0/3.0/2.0	5.0	9.708	7.297	1.000
RRV DM					
Struct	2.0/1.0/---	3.0		7.682	1.200
Power	1.6/1.0/1.0	3.6	10.057	7.954	1.000
Harness	1.2/1.0/1.0	3.2	10.057	6.890	0.900
Thermal	1.1/1.0/2.0	4.1		7.200	1.000
TT&C	2.9/1.0/2.0	5.9	10.705	7.767	0.300
RcvSys	2.0/1.0/2.0	5.0	9.822	7.281	0.200
AMast	7.0/3.0/3.0	13.0	10.057	7.682	0.600
I&T(nGNC)	2.0/1.0/2.0	5.0	9.743	7.422	1.000
GNC Ctl	3.8/2.0/2.0	7.8	9.822	7.281	0.700
GPS	7.0/4.0/4.0	15.0	9.822	7.281	0.700
Ant	10.0/7.0/7.0	24.0	9.822	7.281	0.300
I&T	6.0/2.0/4.0	12.0	9.256	6.853	1.000
Prop Str	2.0/1.0/1.0	4.0		7.682	1.200
Prop	1.3/1.0/1.0	3.3		9.669	1.000
I&T	2.0/1.0/2.0	5.0		8.436	1.000
I&T	2.0/1.0/2.0	5.0	9.546	7.938	1.000
RRV I&T					
	2.0/3.0/2.0	5.0			
RM					
EM	3.3/1.0/1.0	5.3	10.705	7.767	1.000
SM	3.3/1.0/1.0	5.3	10.705	7.767	1.000
PV	3.3/1.0/1.0	5.3		7.682	1.000
RM I&T	2.0/1.0/1.0	4.3	10.071	7.363	1.000
MM/RM I&T					
	2.0/1.0/2.0	5.0	9.929	7.395	1.000
Adapter					
	5.8/1.0/1.0	7.8	10.057	7.682	0.600

TABLE 7: MASS PROPERTIES SUMMARY

<u>Item</u>	<u>Price H</u>			<u>Mass</u>			<u>Percent</u>	
	<u>Dry</u>	<u>%Fnl</u>		<u>Final Report (Table 6.3-6)</u>	<u>Cont</u>	<u>%Mar</u>	<u>DWt</u>	<u>FVS</u>
				<u>Dry</u>				
Main Structure	509	-18		417.1		24	14.7	12.2
Astromast	150	+ 2		152.7		4	5.4	2.1
DM Power System	210	+14		240.0		8	8.5	7.3
MM Power System	100	+112		212.0		9	7.5	4.9
Propulsion	141	+12		157.3		12	5.6	6.4
Propellant					400	--		
DM Thermal	10	-0-		10.0		20	0.4	0.4
MM Thermal	45	+12		50.4		24	1.8	5.6
Recovery System	150	+29		193.0		6	6.8	0.7
Heat Shield	421	-0-		421.0		5	14.9	10.8
TT&C	118	-61		45.6		3	1.6	5.5
GNC/Computer	243	- 8		224.0		10	7.9	5.2
Harness	85	-0-		85.0		20	3.0	3.8
RRV (Dry)	2182	+ 1		2208.1		12	78.1	64.9
Payload	632	- 2		621.0		16	21.9	35.1
Rodents, etc.					351			
RRS Total (Dry)	2814	+ 0.5		2828.7		13	100.0	100.0
(Wet)	3565	+ 0.4		3579.7		10	+26.5	
Ballast	35	-0-		35.0				
Margin	352	+ 0.5		353.9				
Launch Weight	3952	+ 0.4		3968.6				

FIGURE 1: PRICE H ESTIMATED DELIVERY SCHEDULE

Schedule (*) and quantity delivered by PRICE H run.

Item	Months												Quantity	
	0	1	2	3									Runs 3/4/6	Total
=====														
<u>RRV MM</u>														
Struct	S.....		F.....	1P									3.6/1.0/---	4.6
Power	S.....		F...2P										4.2/1.0/1.0	6.2
Harness	S.....		F..12P										3.0/1.0/1.0	5.0
Thermal	S.....		F...1P										3.6/1.0/1.0	5.6
HShield	S.....		F..1.2.P										1.9/1.0/2.0	4.9
TT&C	S.....		F...12P										3.7/1.0/2.0	6.7
ECLSS	S.....		F...1P										3.1/1.0/1.0	5.1
I&T	S.....		F.1.2.P										2.0/3.0/2.0	5.0
=====														
<u>RRV DM</u>														
Struct	S.....		F..12P										2.0/1.0/---	3.0
Power	S.....		F..1.2.P										1.6/1.0/1.0	3.6
Harness	S.....		F12.P										1.2/1.0/1.0	3.2
Thermal	S.....		F1P									(**)	1.1/1.0/2.0	4.1
TT&C	S.....		F..1.2P										2.9/1.0/2.0	5.9
RcvSys	S.....		F12P										2.0/1.0/2.0	5.0
AMast	S.....		F....12P										7.0/3.0/3.0	13.0
I&T(nGNC)	S.....		F.1.2.P										2.0/1.0/2.0	5.0
GNC Ctl	S.....		F....12P										3.8/2.0/2.0	7.8
GPS	S.....		F.....12P										7.0/4.0/4.0	15.0
Ant	S....		F..2P										10.0/7.0/7.0	24.0
I&T	S.....		F.....12P										6.0/2.0/4.0	12.0
Prop Str	S.....		F.1..2.P									(**)	2.0/1.0/1.0	4.0
Prop	S.....		F.1..2...P									(**)	1.3/1.0/1.0	3.3
I&T	S.....		F....1.2P									(**)	2.0/1.0/2.0	5.0
I&T	S.....		F..12.P										2.0/1.0/2.0	5.0

RRV I&T	S.....		F..1.2.P										2.0/3.0/2.0	5.0
=====														
<u>RM</u>														
EM	S.....		F.....12P										3.3/1.0/1.0	5.3
SM	S.....		F.....1.2P										3.3/1.0/1.0	5.3
PV	S.....		F...12P										3.3/1.0/1.0	5.3
RM I&T	S.....		F..1.5.7										2.0/1.0/1.0	4.3
=====														
MM/RM I&T	S.....		F..12.P										2.0/1.0/2.0	5.0
=====														
Adapter	S.....		F.....2P										5.8/1.0/1.0	7.8
=====														

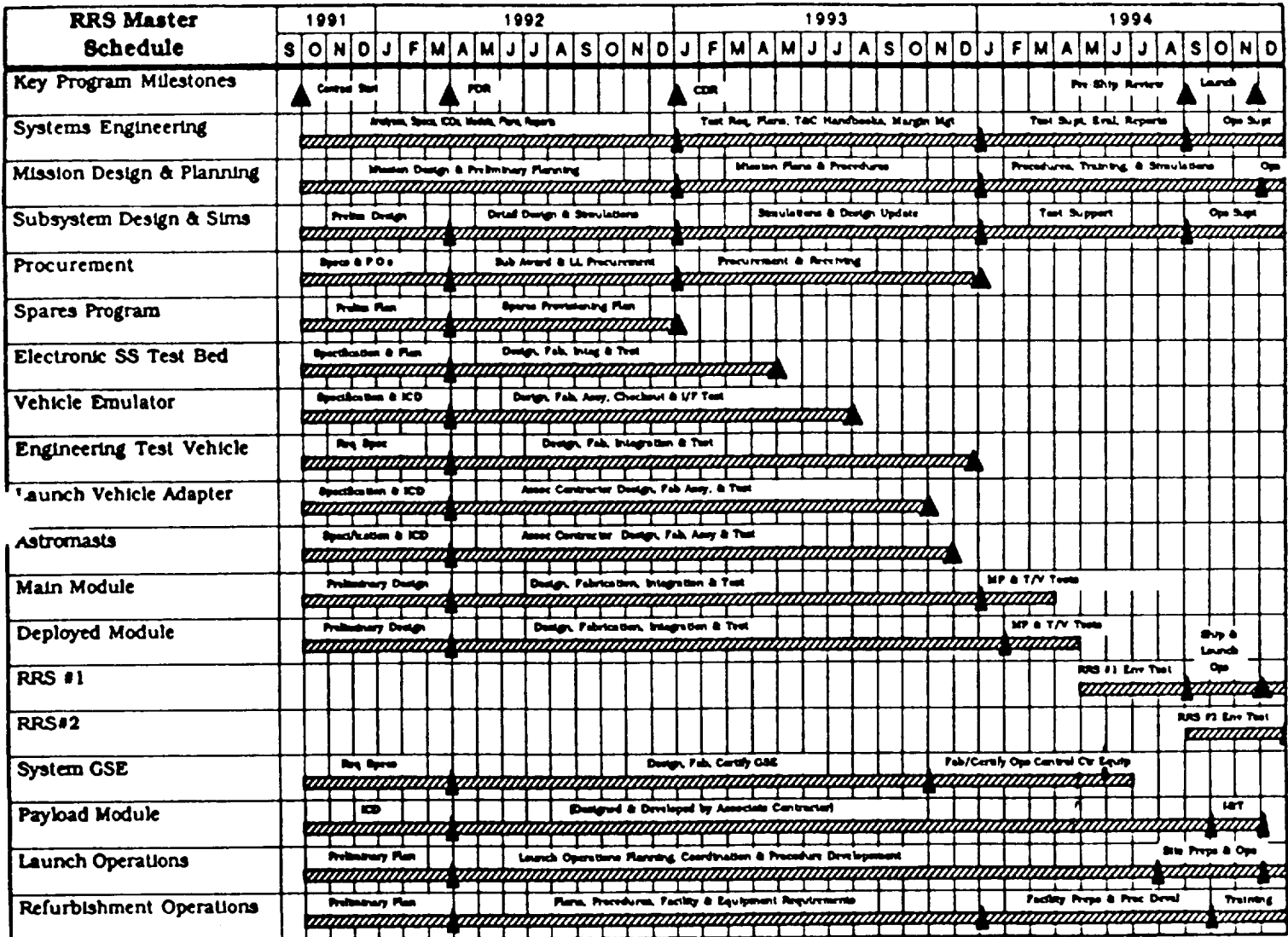
INDICATORS: S=Start, F=First Unit, 1=End FV1 Run, 2=FV2, P=Spare Parts
 NOTE: (*) When 2 runs finish in the same month only the later indicator is shown (e.g., no 1 and a 2 means 1 and 2 are within the same month.)
 (**) Run #7 data used for spares (see text for explanation).

FIGURE 2: PRICE H BASED MASTER SCHEDULE

	91	92	93	94
Item	JASONDJFMAMJJASONDJFMAMJJASONDJFMAMJJASONDJ			
RRV MM				
Struct	S.....	F.....	1P	
Power		S.....	F...2P	
Harness		S.....	F..12P	
Thermal	S.....	F...1P		
HShield	S.....	F..1.2.P		
TT&C		S.....	F...12P	
ECLSS		S.....	F...1P	
I&T			S.....	F..1.2.P
RRV DM				
Struct	S.....	F..12P		
Power	S.....	F..1.2.P		
Harness		S.....	F12.P	
Thermal			S.....	F1P
TT&C		S.....	F..1.2P	
RcvSys			S.....	F12P
AMast		S.....	F....12P	
I&T(nGNC)		S.....	F..1.2.P	
GNC Ctl	S.....	F....12P		
GPS		S.....	F....12P	
Ant			S....	F..2P
I&T		S.....	F....12.P	
Prop Str	S.....	F..1.2.P		
Prop	S.....	F..1.2....P		
I&T		S.....	F....1.2P	
I&T			S.....	F..12.P
RRV I&T			S.....	F..1.2.P
RM				
EM		S.....	F....12P	
SM		S.....	F....1.2P	
PV		S.....	F..12P	
RM I&T			S.....	F..1.5.7
MM/RM I&T			S.....	F..12.P
Adapter			S.....	F....2P
	91	92	93	94
	JASONDJFMAMJJASONDJFMAMJJASONDJFMAMJJASONDJ			

INDICATORS: S=Start, F=First Unit, 1=End FV1 Run, 2=FV2, P=Spare Parts
 NOTE: When 2 runs finish in the same month only the later indicator is shown

FIGURE 3: RRS PROGRAM MASTER SCHEDULE



Reference

Appendix A, RRV Manufacturing Plan,
Phase B Study Final Report Appendices

TABLE 8: PRICE H MAIN MODULE SUMMARY

<u>Item</u> Wt/Vol	<u>Development</u>			<u>Dev + 1 Flt</u>			<u>Dev + 2 Flt</u>			<u>Dev + 2 Flt + S</u>		
	Q/T	\$E/M	\$ToT	Q/T	\$E/M	\$ToT	Q/T	\$E/M	\$ToT	Q/T	\$E/M	\$ToT
Structure 309/172	1 18	3399 1130	4529	3.6 24	4155 3323	7478	4.6 25	4317 4111	8429			
Power 100/1.5	1 12	92 1447	1540	4.2 16	280 4726	5006	5.2 16	336 5675	6011	6.2 17	392 6605	6997
Harness 35/2	1 15	1221 271	1492	3 18	1428 660	2088	4 19	1480 841	2321	5 20	1521 1017	2538
Thermal 45/1.5	1 16	4048 314	4362	3.6 21	4783 891	5673	4.6 22	4908 1097	6004	5.6 22	5005 1298	6303
Heat Sh 421/11.7	1 18	7910 1363	9273	1.9 21	8689 2312	11001	2.9 23	9184 3307	12491	4.9 25	9789 5201	14989
TT&C 20/3	1 12	121 772	892	3.7 16	226 2290	2515	5.7 17	294 3318	3612	7.7 18	360 4309	4669
ECLSS 127/6	1 13	878 293	1171	3.1 17	1044 749	1794	4.1 18	1088 953	2041	5.1 18	1124 1153	2276
Total MM Hdwr		17669 5590	23259		20605 14951	35555		21607 19302	40909		22508 23694	46201
MM I&T 47.3/2.75	1 14	2323 314	2637	2 36*	3632 547	4180	3 18	2700 766	3466	5 20	2861 1182	4042
Total MM		19992 5904	25896		24237 15498	39735		24307 20068	44375		25369 24876	50243

TABLE 9: PRICE H DEPLOYED MODULE (CONTROL ASSEMBLY) SUMMARY

Item Wt/Vol	<u>Development</u>			<u>Dev + 1 Flt</u>			<u>Dev + 2 Flt</u>			<u>Dev + 2 Flt + S</u>		
	Q/T	\$E/M	\$Tot	Q/T	\$E/M	\$Tot	Q/T	\$E/M	\$Tot	Q/T	\$E/M	\$Tot
Structure	1	941	1170	2	1709	2457	3	1108	1682			
50/39	15	230		18	748		18	573				
Power	1	3848	6045	1.6	4156	7363	2.6	4493	9283	3.6	4728	11028
210/3	20	2197		23	3207		25	4790		27	6301	
Harness	1	1383	1682	1.2	1422	1767	2.2	1553	2116	3.2	1630	2399
51/4	15	299		15	345		17	563		19	768	
Thermal	1	439	474	1.1	445	482	2.1	486	550			
10/0.2	11	35		12	38		13	63				
TT&C	1	170	1303	2.9	281	3014	4.9	383	4659	6.9	481	6231
39/2	13	1132		16	2733		18	4275		19	5749	
Rec Sys	1	59	388	2	80	672	3	99	939	5	136	1448
150/6	8	330		9	592		10	840		11	1312	
AMast	1	638	883	7	861	2143	10	914	2673	13	960	3184
50/3	12	245		17	1282		18	1759		19	2224	
GNC	1	882	2043	3.8	1246	5303	5.8	1402	7314	7.8	1542	9247
109/5.55	16	1161		21	4057		22	5911		23	7703	
DMC Hdwr		8360	13988		10200	23201		10438	29216		11071	35769
		5629			13002			18744			24693	
DMC I&T	1	5928	6690	2	6928	8905	3	7237	10147	5	7347	10382
48.43/2.28	17	762		19	1976		21	2910		23	3035	
Total DMC		14288	20678		17128	32106		17675	39363		18418	46151
		6391			14978			21684			27728	

TABLE 10: PRICE H DEPLOYED MODULE (PROPULSION ASSEMBLY) SUMMARY

Item Wt/Vol	<u>Development</u>			<u>Dev + 1 Flt</u>			<u>Dev + 2 Flt</u>		
	Q/T	\$E/M	\$ToT	Q/T	\$E/M	\$ToT	Q/T	\$E/M	\$ToT
Structure	1	1936	2539	2	1622	2370	3	2296	3804
150/38	16	603		18	748		21	1508	
Propulsion	1	624	5282	1.3	696	6462	2.3	917	10169
141/10	24	4658		26	5766		29	9252	
Total DMP Hdwr		2560	7821		2318	8832		3213	13973
		5261			6514			10760	
DMPA I&T	1	668	841	2	684	970	3	784	1210
17.78/1.19	15	172		17	287		19	427	
Total DMP		3228	8662		3002	9802		3997	15183
		5433			6801			11187	

TABLE 11: PRICE H PAYLOAD MODULE SUMMARY

Item Wt/Vol	<u>Development</u>			<u>Dev + 1 Flt</u>			<u>Dev + 2 Flt</u>			<u>Dev + 2 Flt + S</u>		
	Q/T	\$E/M	\$ToT	Q/T	\$E/M	\$ToT	Q/T	\$E/M	\$ToT	Q/T	\$E/M	\$ToT
Exp Mod	1	1253	4957	3.3	1755	11642	4.3	1925	14304	5.3	2086	16892
132/14	22	3704		28	9887		29	12379		30	14087	
ECLSS	1	15111	19319	3.3	17934	29154	4.3	18550	32597	5.3	19048	35849
268/12.3	24	4208		30	11220		32	14046		33	16800	
Pres V	1	2978	3378	3.3	3501	4589	4.3	3611	4987	5.3	3697	5338
105/28	16	401		20	1088		21	1368		22	1641	
Total PM Hdwr		19342	27654		23190	45385		24086	51879		24831	58079
		8313			22195			27793			33248	
PM I&T	1	3494	4035	2	3863	4809	3	4066	5391	4.3	4240	6038
34.57/1.53	17	541		20	946		22	1325		24	1798	
Total PM		22836	31689		27053	50194		28152	57270		29071	64117
		8854			23141			29118			35046	

TABLE 12: PRICE H SYSTEM SUMMARY

Item Wt/Vol	Development			Dev + 1 Flt			Dev + 2 Flt			Dev + 2 Flt + S		
	Q/T	\$E/M	\$ToT	Q/T	\$E/M	\$ToT	Q/T	\$E/M	\$ToT	Q/T	\$E/M	\$ToT
Total MM		19992	25896		24237	39735		24307	44375		25369	50243
		5904			15498			20068			24876	
Total DMC		14288	20678		17128	32106		17675	39363		18418	46151
		6391			14978			21684			27728	
Total DMP		3228	8662		3002	9802		3997	15183			
		5433			6801			11187				
DM I&T	1	3850	4410	2	4257	5238	3	4478	5853	5	4748	6874
47.07/2.05	16	560		19	981		20	1376		22	2125	
Total Vehicle		41358	59646		48624	86881		50457	104774		52532	118451
		18288			38258			54315			65916	
Lnch Veh Adp	1	2097	4619	5.8	3103	14444	6.8	3248	16298	7.8	3387	18125
1000/249	15	2522		22	11341		22	13050		23	14738	
Tot Sys I&T	1	4882	5673	2	5401	6786	3	5684	7626	5	6033	9033
82.197/4.184	17	790		20	1385		22	1942		24	3000	
Tot Sys (w/o PM)		48337	69938		57128	108111		59389	128698		61952	145609
		21600			50984			69307			83654	
Total PM		22836	31689		27053	50194		28152	57270		29071	64117
		8854			23141			29118			35046	
MM/PM I&T	1	3474	3994	2	3841	4751	3	4041	5317	5	4285	6254
45.61/2.27	17	521		20	910		21	1276		23	1969	
Total (w PM)		74644	105621		88018	163054		91583	191284		95308	215977
		30976			75035			99701			120669	

TABLE 13: GNC I&T ESTIMATION

<u>PROTO Q</u>	<u>Run 3</u> <u>6</u>	<u>Run 4</u> <u>10</u>	<u>Inc</u>	<u>2 Units</u>	<u>Estimated</u>	
					<u>8</u>	<u>12</u>
<u>PROG COST</u>						
<u>Engineering</u>						
Drafting	503	516	13	6	509	522
Design	1793	1875	82	41	1834	1916
Systems	215	218	3	2	217	220
Proj Mgmt	223	266	43	22	245	288
Data	75	82	7	3	78	85
Subt (Eng)	2809	2957	148	74	2883	3031
<u>Manufacturing</u>						
Production	-	-	-	-	-	-
Prototype	926	1453	527	263	1189	1716
Tool-Test Eq	106	159	53	27	133	186
Subt (Mfg)	1032	1612	580	290	1322	1902
Total Cost	3841	4569	728	364	4205	4933
<u>Schedule</u>						
Months to:						
1st Item	14	14	-	-	14	14
Finish	6	8	2	0.5	7	9
Total	20	22	2	0.5	21	23
Start	Oct 91	Oct 91			Oct 91	Oct 91
1st Item	Nov 92	Nov 92			Nov 92	Nov 92
Finish	May 93	Jul 93			Jun 93	Aug 93
<u>Cost</u>						
Data					78	85
Test					4072	4662
GSE					133	186
Total					4205	4933

TABLE 14: COST SUMMARY FOR RUN #5

All cost elements set to Quantity = 1

Item	Dev	SysE	Data	Fab	Test	GSE	SSTot
RRV MM							
Structure	2552	712	138	1012	---	119	4529
Power	31	50	11	1245	---	203	1540
Harness	1019	167	34	231	---	40	1492
Thermal	3367	577	103	266	---	48	4362
HShield	6340	1325	245	1217	---	146	9273
TT&C	73	37	10	713	---	5	772
ECLSS	695	151	32	261	---	32	1171
I&T	---	---	61	---	2530	46	2637
RRV DM							
Structure	710	194	38	204	---	26	1170
Power	3152	589	108	1893	---	305	6045
Harness	1155	190	38	255	---	44	1682
Thermal	349	76	14	30	---	5	474
TT&C	101	54	15	1047	---	86	1303
RcvSys	33	19	6	310	---	20	388
AMast	532	83	23	216	---	29	883
I&T(nGNC)	---	---	96	---	---	74	4210
GNC Ctl	151	67	16	805	---	105	1244
GPS	442	73	18	207	---	28	235
Ant	11	2	1	16	---	1	32
I&T	---	---	60	---	2387	33	2480
Prop Str	1456	402	78	535	---	68	603
Prop	374	206	43	4084	---	574	5282
I&T	---	---	20	---	799	21	841
I&T	---	---	102	---	4231	77	4410
RRV I&T	---	---	115	---	4893	98	5106
RRV Tot	22543	4974	1425	15547	14840	2233	62200
RM							
EM	943	259	51	3186	---	518	4957
SM	12628	2106	337	3614	---	594	19319
PV	2390	495	91	359	---	42	3378
RM I&T	---	---	89	---	3869	77	4035
RM Tot	15961	2860	568	7159	3869	1231	31689
MM/RM I&T	---	---	89	---	3831	74	3994
Adapter	1686	323	88	2268	---	354	4619
LV I&T	---	---	13	---	543	11	567
RRS Total	40190	8157	2183	24974	23083	3903	103069

TABLE 15: PROPULSION ENGINEERING ASSESSMENT

<u>Item</u>	<u>Type</u>	<u>Number</u>	<u>Non- Recur</u>	<u>Recurring</u>		<u>SubSy Total</u>	<u>Refur</u>
				<u>Unit Cost</u>	<u>Total</u>		
Design			500		50	550	
Fabrication							
Engines							
De-Orbit	100 lbf	6	200	85	510	2205	0
Attitude Control	1 lbf in cluster of 4	4	0	160	640		0
Propellant Tankage	Bladder (650 lbs N2H2)	6	0	85	510		0
Valves							
Latch	1/2 inch	3	100	30	90		
	1/4 inch	2	0	10	20		
Fill & Drain	1/4 inch	12	0	5	60		
Heaters/Wrap/Sensors	Various	1	0	75	75		
Integration and Test						700	
Integration			100		300		
Test			100		200		300
Total			1000		2455 1905		300

TABLE 16: PROPULSION COST ASSESSMENT

	Engineering Assessment			PRICE H	% VAR
	NonRecur	Recur	Total		
Design	500	50	550	580	+ 5
Dev Sys					
Fabrication	300	1905	2205(*)	4084	+85
Int & Test	200	500	700	799	+14
Int	100	300			
Test	100	200			
Data				63	+
GSE				595	+
Total	1000	2455	3455	6121	+77

(*) The SAIC "bottom-up" cost assessment is based upon selection and integration of existing hardware components. The PRICE H estimate is based upon an initial build (90% new design with 60% design repeat) of most components.

TABLE 17: COST SUMMARY FOR RUN #1

ETV, Partial Prototypes, and 1st Flight Vehicle

Item	Dev	SysE	Data	Fab	Test	GSE	SSTot
RRV MM							
Structure	3012	962	181	3042	---	281	7478
Power	37	204	38	4181	---	545	5006
Harness	1179	209	40	582	---	78	2088
Thermal	3975	689	118	785	---	105	5673
HShield	6944	1477	267	2101	---	210	11001
TT&C	86	115	24	2134	---	155	2515
ECLSS	806	199	39	691	---	58	1794
I&T	---	---	83	---	4028	69	4180
RRV DM							
Structure	1275	365	69	676	---	72	2457
Power	3374	663	120	2797	---	410	7363
Harness	1186	196	39	297	---	48	1767
Thermal	355	76	14	32	---	5	482
TT&C	116	135	29	2546	---	187	3014
RcvSys	37	34	9	560	---	32	672
AMast	665	160	36	1169	---	113	2143
I&T(nGNC)	---	---	106	---	4842	116	5064
GNC Ctl	297	166	34	2485	---	258	3241
GPS	554	140	29	1086	---	108	1917
Ant	14	9	2	112	---	7	145
I&T	---	---	75	---	3660	106	3841
Prop Str	1208	348	66	676	---	72	2370
Prop	389	254	52	5074	---	692	6462
I&T	---	---	20	---	920	30	970
I&T	---	---	111	---	5010	117	5238
RRV I&T	---	---	126	---	5831	150	6107
RRV Tot	25509	6401	1727	31026	24291	4024	92988
RM							
EM	1104	549	101	8650	---	1237	11642
SM	14780	2689	465	9811	---	1410	29154
PV	2793	602	107	1000	---	88	4589
RM I&T	---	---	97	---	4592	120	4809
RM Tot	18677	3840	770	19461	4592	2855	50194
MM/RM I&T	---	---	97	---	4540	114	4751
Adapter	2077	848	178	10374	---	966	14444
LV I&T	---	---	14	---	648	17	679
RRS Total	46263	11089	2786	60861	34071	7978	163056

TABLE 18: COST SUMMARY FOR RUN #4

ETV, Partial Prototypes, and Two Flight Vehicles

Item	Dev	SysE	Data	Fab	Test	GSE	SSTot
<u>RRV MM</u>							
Structure	3086	1039	194	3772	---	340	8429
Power	38	252	46	5031	---	644	6011
Harness	1215	222	42	745	---	96	2321
Thermal	4073	713	122	971	---	126	6004
HShield	7305	1594	285	3029	---	277	12491
TT&C	90	171	34	3098	---	220	3612
ECLSS	829	215	42	883	---	70	2041
I&T	---	---	70	---	3305	91	3466
<u>RRV DM</u>							
Structure	822	241	45	522	---	51	1682
Power	3591	765	136	4214	---	576	9283
Harness	1289	221	43	493	---	70	2116
Thermal	388	84	15	56	---	7	550
TT&C	123	217	44	3990	---	285	4659
RcvSys	38	49	11	797	---	43	939
AMast	684	190	41	1608	---	151	2673
I&T(nGNC)	---	---	110	---	5318	150	5578
GNC Ctl	310	232	45	3587	---	359	4533
GPS	573	175	35	1618	---	157	2559
Ant	15	13	3	180	---	11	222
I&T	---	---	82	---	4328	159	4569
Prop Str	1685	514	97	1373	---	135	3804
Prop	420	416	81	8190	---	1062	10169
I&T	---	---	24	---	1145	41	1210
I&T	---	---	118	---	5581	154	5853
RRV I&T	---	---	133	---	6530	200	6863
RRV Tot	26574	7323	1898	44157	26207	5475	111637
<u>RM</u>							
EM	1135	669	121	10852	---	1527	14304
SM	15184	2873	494	12308	---	1738	32597
PV	2869	630	111	1260	---	107	4978
RM I&T	---	---	103	---	5129	159	5391
RM Tot	19188	4172	829	24420	5129	3531	57270
MM/RM I&T	---	---	103	---	5063	151	5317
Adapter	2105	949	195	11946	---	1105	16298
LV I&T	---	---	15	---	726	22	763
RRS Total	47867	12444	3040	80523	37125	10284	191285

TABLE 19: COST SUMMARY FOR RUN #6

ETV, Partial Prototypes, Two Flight Vehicles and Spares

Item	Dev	SysE	Data	Fab	Test	GSE	SSTot
RRV MM							
Structure	3086	1039	194	3772	---	340	8429
Power	38	299	54	5864	---	741	6997
Harness	1242	235	44	903	---	114	2538
Thermal	4147	733	125	1152	---	146	1298
HShield	7703	1773	313	4795	---	405	14989
TT&C	92	226	43	4026	---	283	4669
ECLSS	847	232	45	1071	---	81	2276
I&T	---	---	75	---	3836	131	4042
RRV DM							
Structure	822	241	45	522	---	51	1682
Power	3721	855	151	5567	---	733	11028
Harness	1346	238	45	678	---	90	2399
Thermal	388	84	15	56	---	7	550
TT&C	127	298	57	5370	---	379	5749
RcvSys	40	79	17	1249	---	63	1448
AMast	697	219	46	2035	---	189	3184
I&T(nGNC)	---	---	120	---	6201	220	6541
GNC Ctl	317	297	56	4650	---	457	5777
GPS	585	209	41	2133	---	204	3173
Ant	15	18	4	245	---	15	297
I&T	---	---	---	---	---	---	---
Prop Str	1685	514	97	1373	---	135	3804
Prop	420	416	81	8190	---	1062	10169
I&T	---	---	24	---	1145	41	1210
I&T	---	---	127	---	6521	226	6874
RRV I&T	---	---	146	---	7690	294	8130
RRV Tot	27318	8005	1965	53651	25393	6407	117253
RM							
EM	1157	787	141	12997	---	1809	16892
SM	15485	3042	520	14742	---	2056	35849
PV	2925	656	116	1515	---	126	5338
RM I&T	---	---	109	---	5720	209	6038
RM Tot	19567	4485	886	29254	5720	4200	64117
MM/RM I&T	---	---	112	---	5920	222	6254
Adapter	2129	1048	211	13497	---	1241	18125
LV I&T	---	---	16	---	854	33	903
RRS Total	49014	13538	3190	96402	37887	12103	212434

TABLE 20: OVERALL COST SUMMARY

ETV, Partial Prototypes, Two Flight Vehicles and Spares

Item	1 Unit	thru FV1	FV2	thru FV2	Spares	Refurb	SSTot
RRV MM							
Struct	4529	7478	951	8429	---		8429
Power	1540	5006	1005	6011	986		6997
Harness	1492	2088	233	2321	217		2538
Thermal	4362	5673	371	6004	---		1298
HShield	9273	11001	1490	12491	2498		14989
TT&C	772	2515	1097	3612	1057		4669
ECLSS	1171	1794	247	2041	235		2276
I&T	2637	4180		3466	---		4042
RRV DM							
Struct	1170	2457	---	1682	---		1682
Power	6045	7363	1920	9283	1745		11028
Harness	1682	1767	349	2116	283		2399
Thermal	474	482	68	550	---		550
TT&C	1303	3014	1645	4659	1090		5749
RcvSys	388	672	267	939	509		1448
AMast	883	2143	530	2673	511		3184
I&T(nGNC)	4210	5064	514	5578	963		6541
GNC Ctl	1244	3241	1292	4533	1244		5777
GPS	235	1917	642	2559	614		3173
Ant	32	145	77	222	75		297
I&T	2480	3841	728	4569	---		---
Prop Str	603	2370	1434	3804	---		3804
Prop	5282	6462	3707	10169	---		10169
I&T	841	970	240	1210	---		1210
I&T	4410	5238	615	5853	---	1021	6874
RRV I&T	5106	6107	756	6863	---	1021	8130
RRV Tot	62200	92988	18649	111637	4595	1021	117253
RM							
EM	4957	11642	2662	14304	2588		16892
SM	19319	29154	3443	32597	3252		35849
PV	3378	4589	209	4978	540		5338
RM I&T	4035	4809	582	5391	---	647	6038
RM Tot	31689	50194	7076	57270	6842	647	64112
MM/RM I&T	3994	4751	566	5317	---	937	6254
Adapter	4619	14444	1854	16298	1827	---	18125
LV I&T	567	679	84	763	---	140	903
RRS Tot	103069	163056	28229	191285	13264	2745	212434

TABLE 21: SOFTWARE SIZING / COST ESTIMATE

	Size (Kwords)			
	RRV		RM	
	Code	Data	Code	Data
Command	1.0	4.0	1.0	4.0
Telemetry	1.0	2.5	1.0	2.5
Sun Sensor	0.5	0.1		
Earth Sensor	1.5	0.8		
Magnetometer	0.2	0.1		
Kinematics	2.0	0.2		
Error Determination	1.0	0.1		
Magnetic Control	1.0	0.2		
Thruster Control	0.6	0.4		
Reaction Wheel Control	1.0	0.3		
Fault Detection	4.0	1.0	4.0	1.0
Fault Correction	2.0	10.0	2.0	10.0
Power Management	1.2	0.5		
Thermal Control	0.8	1.5	0.8	1.5
Memory Words	17.8	21.7	8.8	19.0
Code Words	17.8	5.4	8.8	4.8
Total	23.2		13.6	
KSLOC	4.65/\$4760K		2.7/\$2764K	

Note: Cost/SLOC estimated to be in DMSP/GPS complexity range

TABLE 22: COST SUMMARY BY VEHICLE FUNCTION

<u>Item</u>	<u>Pounds</u>	<u>\$RRS</u>	<u>\$RRV</u>	<u>\$K</u>	<u>\$RRS</u>	<u>\$RRV</u>
Structure	509	18.0	23.3	12305	7.9	12.8
Astromast	150	5.3	6.9	2143	1.3	2.2
Power	310	11.0	14.2	12369	8.0	12.9
Propulsion	141	5.0	6.5	6462	4.2	6.7
Thermal	55	1.9	2.5	6155	3.9	6.4
Recovery	150	5.3	6.9	672	0.4	0.7
Heat Shield	421	15.0	19.3	11001	7.1	11.5
TT&C	118	4.2	5.4	5529	3.6	5.8
GNC	243	8.6	11.1	5303	3.4	5.5
Harness	85	3.0	3.9	3855	2.5	4.0
Software	---	----	----	4760	3.1	5.0
Integ & Test	---	----	----	25400	16.3	26.5
RRV	2182	77.5	100.0	95954	61.7	100.0
Payload	632	22.5		45385	30.3	
Software	---	----	----	2764	1.8	
Integ & Test	---	----	----	9560	6.1	
RM	632	22.5		59503	37.2	
RRS-Dry	2814	100.0		155457	100.0	
-Wet	3565					
Ballast	35					
Margin	352					
Integ & Test						
Launch	3952					
Adpater	1000			14444		
Integration & Test				679		
Total	4952			170580		

TABLE 23: COST SUMMARY BY PROGRAM FUNCTION

<u>First Vehicle</u>	<u>RRV</u>	<u>RM</u>	<u>Adapter</u>	<u>Total</u>	<u>\$</u>
Development	25509	18677	2077	46263	27.1
SE and Prog Mgt	6401	3840	848	11089	6.5
Data	1727	867	192	2786	1.6
Fabrication	31026	19461	10374	60861	35.7
Test	24291	9560	648	34071	20.0
GSE	4024	2969	983		4.7
Software	4760	2764	---	7524	4.4
Total	95954	59503	15123	170580	100.0
\$	56	35	9	100	
 <u>QUANTITY</u>	 FV-1 ETV VE ----- Eng	 Flt RM PME GCEM Eng	 Flt ETV/Rec VE ----- Fact (2)		
<u>Additional Veh</u>	20443	5848	1938	28229	
<u>Spares/Refurbish</u>					24693
					223502

TABLE 24: RRS OPERATIONS AND SUPPORT COST ESTIMATE

OPERATIONS & SUPPORT WORK BREAKDOWN STRUCTURE	RRS ₈		OPERATION & SUPPORT COST ESTIMATE (FY98M)					% OF TOTAL
	8-11	DELTA	LAUNCHES		HW/EQUIP	PERSONNEL & LEASE	TOT COST 6920 OPT	
			5-11	DELTA				
0.0 RRS O&S PRICE (W/ 10% FEE LESS ELV)	94.0	71.1	850	1419	123.7	44.0	1681.6	100.0%
1.0 RRS O&S COST	86.2	64.6	850	1419	112.3	40.0	1657.7	98.6%
1.1 RRV O&S REPLACE/REFURBISHMENT	49.6	37.2			63.2		112.7	6.7%
1.1.1 MAIN SPT STRUCTURE	3.9	2.9			1.6		5.5	0.3%
1.1.2 EXTERIOR SHELL	1.0	1.3			3.6		5.4	0.3%
1.1.3 ASTROMASTS	4.0	3.0			1.6		5.5	0.3%
1.1.4 BALLAST	0.0	0.0			0.0		0.0	0.0%
1.1.5 PH CONSUMABLES (WATER/AIR/O ₂ LESS TANKS)	1.1	0.8			0.7		1.8	0.1%
1.1.6 POWER (PHOTOVOLTAIC)	7.5	5.6			0.7		8.1	0.5%
1.1.7.1 PROPULSION (W/O PROPELLANT)	7.4	5.5			0.7		8.1	0.5%
1.1.7.2 HYDRAZINE	0.1	0.1			1.1		1.3	0.1%
1.1.8 THERMAL	1.3	1.0			0.5		1.9	0.1%
1.1.9 HEAT SHIELD	4.6	3.4			37.6		42.1	2.5%
1.1.10 TERMINAL REENTRY SYSTEM	0.1	0.1			0.6		0.6	0.0%
1.1.11 TMC	7.0	5.3			2.9		9.9	0.6%
1.1.12 GNC	3.1	2.3			1.3			
1.1.13 RRV INTEGRATION & ASSEMBLY	3.9	2.9			5.2		9.0	0.5%
1.1.14 RRV TEST	3.9	2.9			5.2		9.0	0.5%
1.2 PAYLOAD MODULE REPLAC/REFURD	4.2	3.1			2.6		6.8	0.4%
1.2.1 EXPERIMENT MODULE								
1.2.1.1 FOOD AND RATS	0.1	0.0			0.4		0.5	0.0%
1.2.1.2 CAGES, LGTS, STR	0.1	0.0			0.5		0.6	0.0%
1.2.2.1 SPT MODULE (LIGN, VALVES, VESSEL. PHN)	3.0	2.3			1.3		4.3	0.3%
1.2.2.2 SPT MODULE (IMAGING SYSTEM)	0.2	0.1			0.1		0.2	0.0%
1.2.2.3 SPT MODULE (COMPUTER)	0.2	0.1			0.3		0.5	0.0%
1.2.3 PH INTEGRATION & ASSBY	0.3	0.3			0.2		0.6	0.0%
1.2.4 PH TEST	0.3	0.3			0.2		0.6	0.0%
1.3 RRS O&S PERSONNEL/MISSION						24.4	24.4	1.5%
1.3.1 RRV OPS PERSONNEL/MISSION						13.2	13.2	0.8%
1.3.2 PH OPS PERSONNEL/MISSION						7.9	7.9	0.5%
1.3.3 RECOVERY PERSONNEL/MISSION						3.3	3.3	0.2%
1.3.4 LAUNCH PERSONNEL/MISSION							0.0	0.0%
1.4 LAUNCH O&S REPLAC/REFURD	2.9	2.2	850	1419	26.3		1446.2	86.8%
1.4.1 ELV & FAIRING W/ RF WINDOW								
1.4.1.1 S-11 ELV (OR...)			850					
1.4.1.2 DELTA 6920 ELV				1419			1419.0	84.4%
1.4.2 JETTISON SEP ADAPTER	0.6	0.5			5.0		5.6	0.3%
1.4.3 CRADLE	1.6	1.2			13.2		14.8	0.9%
1.4.4 PAF I/F	0.6	0.5			5.0		5.6	0.3%
1.4.5 POWER & DATA CABLES	0.1	0.1			1.2		1.3	0.1%
1.5 RRS MISSION & RECOVERY EQUIP/FACIL						5.6	5.6	0.3%
1.5.1 NASA TRACK & DATA NETWORK OPS						0.7	0.7	0.0%
1.5.2 RRS GRD CONTROL SYSTEM						1.7	1.7	0.1%
1.5.3 RRS RECOVERY EQUIP & FACIL/MISSION						3.3	3.3	0.2%
1.6 SYSTEM LEVEL O&S COSTS	29.5	22.1			22.5	10.0	62.0	3.7%
1.6.1 RRS SE/PH	17.0	12.8			9.0	4.0	30.0	1.8%
1.6.2 RRS INTEGRATION & ASSBY	5.7	4.3			4.5	2.0	12.2	0.7%
1.6.3 RRS SYSTEM TEST	5.7	4.3			4.5	2.0	12.2	0.7%
1.6.4 RRS TRAINING	1.1	0.9			4.5	2.0	7.6	0.5%

TABLE 25: SYSTEM COST SUMMARY

- o PROVEN BOOSTERS (DELTA/ATLAS) PROVIDE COMPETITIVE EXPERIMENT VALUE
 - Small booster cost more per unit experiment
 - Larger vehicle higher value per launch

o PRICE H COST ESTIMATE, VEHICLE AND RODENT MODULE

Development	\$105 M
Vehicle 1	60
Vehicle 2	26
50% Spares	26
Vehicles 3&4	51

4 Vehicle Ave	34	(GPS IIR Ave is \$50 M)
---------------	----	-------------------------

TOTAL FOR 2 FLIGHT VEHICLES WITH 50% SPARES - \$217 M

LCC ESTIMATE FOR 30 DELTA FLIGHTS, 10 YEARS

Includes SAIC O&S estimate of \$1682 M

	TOTAL (\$ M)	<u>\$M / LAUNCH</u>	
		Single	Dual
2 Flight Vehicles, 50% Spares	2001	67	43
4 Flight Vehicles, 50% Spares	2075	69	45

A P P E N D I C E S

P R I C E H D A T A B A S E

Runs 3 through 11

Enter selection : 1

Processing ... Please wait

PRICE H Model
(190172)

- 1 Specify Custom Global Data File
 - 2 Specify Custom Escalation Rate File
 - 3 Generate Output File
 - 4 Generate Lifecycle Data File
 - 5 Generate Postprocessor File
 - 6 Turn On COMMAND Prompts
 - 7 Display Schedule Penalty Report
 - 8 Select Output Report Format
- H Help
Q Exit Model
R Enter Data and Begin Processing

Enter selection : R

Enter Input Data Filename: TOTAL
Enter Input Data Filename:

Run 3 R+D Only : ETV, partial prototypes, 1st FU

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:45
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

ICU MM

	UNIT WEIGHT	309.00	MODE	2
PROTOTYPE QUANTITY	3.600 UNIT VOLUME	172.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	676.	-	676.
DESIGN	2336.	-	2336.
SYSTEMS	425.	-	425.
PROJECT MGMT	537.	-	537.
DATA	181.	-	181.
SUBTOTAL(ENG)	4155.	-	4155.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3042.	-	3042.
TOOL-TEST EQ	281.	-	281.
SUBTOTAL(MFG)	3323.	-	3323.
 TOTAL COST	 7478.	 -	 7478.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	309.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.797*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	23462*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93* (6)	SEP 93* (24)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:45
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

POWER MM

	UNIT WEIGHT	100.00	MODE	1
PROTOTYPE QUANTITY	4.200	UNIT VOLUME	1.50	QUANTITY/NHA 1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	8.	-	8.
DESIGN	29.	-	29.
SYSTEMS	3.	-	3.
PROJECT MGMT	201.	-	201.
DATA	38.	-	38.
SUBTOTAL (ENG)	280.	-	280.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	4181.	-	4181.
TOOL-TEST EQ	545.	-	545.
SUBTOTAL (MFG)	4726.	-	4726.
TOTAL COST	5006.	-	5006.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
SIGHT	32.000*	68.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	45.333*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.810	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.050	0.050	ELECT VOL FRACTION	0.435*
DESIGN REPEAT	0.950	0.950	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	27948*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92* (4)	JAN 93* (16)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS
DEVELOPMENT TOOLING 1.00*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:45
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

HARNESS MM

	UNIT WEIGHT	35.00	MODE	1
PROTOTYPE QUANTITY	3.000	UNIT VOLUME	2.00	QUANTITY/NHA
				1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	266.	-	266.
DESIGN	913.	-	913.
SYSTEMS	95.	-	95.
PROJECT MGMT	114.	-	114.
DATA	40.	-	40.
SUBTOTAL (ENG)	1428.	-	1428.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	582.	-	582.
TOOL-TEST EQ	78.	-	78.
SUBTOTAL (MFG)	660.	-	660.
TOTAL COST	2088.	-	2088.

SIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS
WEIGHT	5.000*	30.000	ENGINEERING COMPLEXITY 0.900
DENSITY	49.000	15.000*	PROTOTYPE SUPPORT 1.0
MFG. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR 0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION 0.051*
DESIGN REPEAT	0.500	0.200	PLATFORM 2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY 1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR 1.0
			MTBF (FIELD) 172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (3)	MAR 93* (18)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS
DEVELOPMENT TOOLING 1.00*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:45
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

THERMAL MM

	UNIT WEIGHT	45.00	MODE	1
PROTOTYPE QUANTITY	3.600 UNIT VOLUME	1.50	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	875.	-	875.
DESIGN	3100.	-	3100.
SYSTEMS	369.	-	369.
PROJECT MGMT	320.	-	320.
DATA	118.	-	118.
SUBTOTAL (ENG)	4783.	-	4783.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	785.	-	785.
TOOL-TEST EQ	105.	-	105.
SUBTOTAL (MFG)	891.	-	891.
TOTAL COST	5673.	-	5673.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	6.000*	39.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	26.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.800	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.950	ELECT VOL FRACTION	0.091*
DESIGN REPEAT	0.000	0.300	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	133907*

SCHEDULE	START		FIRST ITEM		FINISH
DEVELOPMENT	OCT 91	(16)	JAN 93*	(5)	JUN 93* (21)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:45
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

HS MM

	UNIT WEIGHT	421.00	MODE	2
PROTOTYPE QUANTITY	1.900 UNIT VOLUME	11.70	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1673.	-	1673.
DESIGN	5271.	-	5271.
SYSTEMS	810.	-	810.
PROJECT MGMT	667.	-	667.
DATA	267.	-	267.
SUBTOTAL(ENG)	8689.	-	8689.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2101.	-	2101.
TOOL-TEST EQ	210.	-	210.
SUBTOTAL(MFG)	2312.	-	2312.
TOTAL COST	11001.	-	11001.

SIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	421.000	ENGINEERING COMPLEXITY	1.000
DENSITY	35.983*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	21383*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93* (3)	JUN 93* (21)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:46
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

ITC MM

	UNIT WEIGHT	20.00	MODE	1
PROTOTYPE QUANTITY	3.700 UNIT VOLUME	3.00	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	24.	-	24.
DESIGN	62.	-	62.
SYSTEMS	2.	-	2.
PROJECT MGMT	113.	-	113.
DATA	24.	-	24.
SUBTOTAL (ENG)	226.	-	226.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2134.	-	2134.
TOOL-TEST EQ	155.	-	155.
SUBTOTAL (MFG)	2290.	-	2290.
TOTAL COST	2515.	-	2515.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.000*	4.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	1.333*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.119*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	65805*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92* (4)	JAN 93* (16)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	191*
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:46
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

ECLSS MM

UNIT WEIGHT	127.00	MODE	2
PROTOTYPE QUANTITY	3.100	UNIT VOLUME	6.00
		QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	198.	-	198.
DESIGN	608.	-	608.
SYSTEMS	83.	-	83.
PROJECT MGMT	116.	-	116.
DATA	39.	-	39.
SUBTOTAL (ENG)	1044.	-	1044.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	691.	-	691.
TOOL-TEST EQ	58.	-	58.
SUBTOTAL (MFG)	749.	-	749.
TOTAL COST	1794.	-	1794.

IGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS
WEIGHT	127.000	ENGINEERING COMPLEXITY 0.900
DENSITY	21.167*	PROTOTYPE SUPPORT 1.0
MFG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR 0.250*
NEW DESIGN	0.900	PLATFORM 2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY 1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR 1.0
		MTBF (FIELD) 37694*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (13)	OCT 92* (4)	FEB 93* (17)

SUPPLEMENTAL INFORMATION	TOOLING & PROCESS FACTORS
ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*
	DEVELOPMENT TOOLING 1.00*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:46
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

MM LESS PM I&T

	UNIT WEIGHT	47.30	MODE	1
PROTOTYPE QUANTITY	2.000 UNIT VOLUME	2.75	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	604.	-	604.
DESIGN	2430.	-	2430.
SYSTEMS	235.	-	235.
PROJECT MGMT	281.	-	281.
DATA	83.	-	83.
SUBTOTAL (ENG)	3632.	-	3632.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	478.	-	478.
TOOL-TEST EQ	69.	-	69.
SUBTOTAL (MFG)	547.	-	547.
 TOTAL COST	 4180.	 -	 4180.

IGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	6.034*	41.264*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.708	7.297	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.063*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	129634*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (14)	NOV 92* (22)	SEP 94 (36)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

IT FILENAME: TOTAL

22-AUG-90 18:46
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PM EXP MOD MM

	UNIT WEIGHT	132.00	MODE	1
PROTOTYPE QUANTITY	3.300 UNIT VOLUME	14.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	238.	-	238.
DESIGN	866.	-	866.
SYSTEMS	96.	-	96.
PROJECT MGMT	453.	-	453.
DATA	101.	-	101.
SUBTOTAL (ENG)	1755.	-	1755.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	8650.	-	8650.
TOOL-TEST EQ	1237.	-	1237.
SUBTOTAL (MFG)	9887.	-	9887.
 TOTAL COST	 11642.	 -	 11642.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	78.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	5.571*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.750	ELECT VOL FRACTION	0.088*
DESIGN REPEAT	0.900	0.900	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	19978*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (22)	JUL 93* (6)	JAN 94* (28)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:46
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

SM MOD MM

	UNIT WEIGHT	268.00	MODE	1
PROTOTYPE QUANTITY	3.300 UNIT VOLUME	12.30	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	3185.	-	3185.
DESIGN	11595.	-	11595.
SYSTEMS	1285.	-	1285.
PROJECT MGMT	1404.	-	1404.
DATA	465.	-	465.
SUBTOTAL (ENG)	17934.	-	17934.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	9811.	-	9811.
TOOL-TEST EQ	1410.	-	1410.
SUBTOTAL (MFG)	11220.	-	11220.
TOTAL COST	29154.	-	29154.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	214.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	17.398*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.600	0.900	ELECT VOL FRACTION	0.100*
DESIGN REPEAT	0.200	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	19978*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (24)	SEP 93* (6)	MAR 94* (30)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:46
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PM SPT MOD PRES VESSEL MM

	UNIT WEIGHT	105.00	MODE	2
PROTOTYPE QUANTITY	3.300 UNIT VOLUME	28.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	656.	-	656.
DESIGN	2137.	-	2137.
SYSTEMS	312.	-	312.
PROJECT MGMT	290.	-	290.
DATA	107.	-	107.
SUBTOTAL (ENG)	3501.	-	3501.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1000.	-	1000.
TOOL-TEST EQ	88.	-	88.
SUBTOTAL (MFG)	1088.	-	1088.
TOTAL COST	4589.	-	4589.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	105.000	ENGINEERING COMPLEXITY	1.000
DENSITY	3.750*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	32434*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (4)	MAY 93* (20)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:47
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PM I&T

PRODUCTION QUANTITY	2	UNIT WEIGHT	34.57	MODE	1
PROTOTYPE QUANTITY	2.000	UNIT VOLUME	1.53	QUANTITY/NHA	1
UNIT PROD COST 292.89				MONTHLY PROD RATE	1.00

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	721.	168.	889.
DESIGN	2490.	659.	3149.
SYSTEMS	305.	-	305.
PROJECT MGMT	250.	172.	422.
DATA	97.	86.	183.
SUBTOTAL (ENG)	3863.	1084.	4948.
MANUFACTURING			
PRODUCTION	-	586.	586.
PROTOTYPE	826.	-	826.
TOOL-TEST EQ	120.	350.	469.
SUBTOTAL (MFG)	946.	935.	1881.
TOTAL COST	4809.	2020.	6829.

IGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.620*	22.951*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.071	7.363	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.217*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
ENGINEERING CHANGES	0.057*	0.019*	YEAR OF TECHNOLOGY	1991*
HW/SW INTEG. LEVEL	0.000		RELIABILITY FACTOR	1.0
INTEGRATION LEVEL	0.350	0.350	MTBF (FIELD)	75715*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(17)	FEB 93*	(3)	MAY 93*	(20)
PRODUCTION	MAY 94	(17)	SEP 95*	(1)	OCT 95*	(18) (?)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
T-1 COST	305.21*
AMORTIZED UNIT COST	1009.89*
DEV COST MULTIPLIER	1.00*
PROD COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
PRODUCTION TOOLING	1.00*
RATE TOOLING	0
PRICE IMPROVEMENT FACTOR	0.900*
UNIT LEARNING CURVE	0.917*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

IT FILENAME: TOTAL

22-AUG-90 18:47
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

MM I&T W/PM

	UNIT WEIGHT	45.61	MODE	1
PROTOTYPE QUANTITY	2.000 UNIT VOLUME	2.27	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	718.	-	718.
DESIGN	2469.	-	2469.
SYSTEMS	307.	-	307.
PROJECT MGMT	250.	-	250.
DATA	97.	-	97.
SUBTOTAL (ENG)	3841.	-	3841.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	796.	-	796.
TOOL-TEST EQ	114.	-	114.
SUBTOTAL (MFG)	910.	-	910.
 TOTAL COST	 4751.	 -	 4751.

IGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.574*	34.033*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.929	7.395	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.146*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	73009*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (3)	MAY 93* (20)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:47
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

STRUCTURE DM

	UNIT WEIGHT	100.00	MODE	2
PROTOTYPE QUANTITY	2.000 UNIT VOLUME	39.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	294.	-	294.
DESIGN	981.	-	981.
SYSTEMS	189.	-	189.
PROJECT MGMT	176.	-	176.
DATA	69.	-	69.
SUBTOTAL(ENG)	1709.	-	1709.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	676.	-	676.
TOOL-TEST EQ	72.	-	72.
SUBTOTAL(MFG)	748.	-	748.
TOTAL COST	2457.	-	2457.

IGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	100.000	ENGINEERING COMPLEXITY	1.200
DENSITY	2.564*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	32912*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(16)	JAN 93*	(2)	MAR 93*	(18)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:47
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

WER DM

PROTOTYPE QUANTITY	UNIT WEIGHT	210.00	MODE	1
	1.600 UNIT VOLUME	3.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	767.	-	767.
DESIGN	2607.	-	2607.
SYSTEMS	328.	-	328.
PROJECT MGMT	335.	-	335.
DATA	120.	-	120.
SUBTOTAL (ENG)	4156.	-	4156.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2797.	-	2797.
TOOL-TEST EQ	410.	-	410.
SUBTOTAL (MFG)	3207.	-	3207.
TOTAL COST	7363.	-	7363.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	40.000*	170.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	56.667*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.954	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.200	ELECT VOL FRACTION	0.272*
DESIGN REPEAT	0.500	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	22458*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (20)	MAY 93* (3)	AUG 93* (23)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192	TOOLING & PROCESS FACTORS	
ESCALATION	0.00	DEVELOPMENT TOOLING	1.00*
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:47
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	50.00	MODE	1
PROTOTYPE QUANTITY	1.200 UNIT VOLUME	4.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	281.	-	281.
DESIGN	905.	-	905.
SYSTEMS	103.	-	103.
PROJECT MGMT	93.	-	93.
DATA	39.	-	39.
SUBTOTAL (ENG)	1422.	-	1422.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	297.	-	297.
TOOL-TEST EQ	48.	-	48.
SUBTOTAL (MFG)	345.	-	345.
TOTAL COST	1767.	-	1767.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	45.000	ENGINEERING COMPLEXITY	0.900
DENSITY	49.000	11.250*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.026*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (0)	DEC 92* (15)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:47
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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PROTOTYPE QUANTITY	UNIT WEIGHT	10.00	MODE	2
	1.100 UNIT VOLUME	0.20	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	90.	-	90.
DESIGN	265.	-	265.
SYSTEMS	46.	-	46.
PROJECT MGMT	30.	-	30.
DATA	14.	-	14.
SUBTOTAL (ENG)	445.	-	445.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	32.	-	32.
TOOL-TEST EQ	5.	-	5.
SUBTOTAL (MFG)	38.	-	38.
TOTAL COST	482.	-	482.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	10.000	ENGINEERING COMPLEXITY	1.000
DENSITY	50.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	80800*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91	AUG 92*	SEP 92*
	(11)	(1)	(12)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:48
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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UNIT WEIGHT	39.00	MODE	1
PROTOTYPE QUANTITY	2.900	UNIT VOLUME	2.00
		QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	33.	-	33.
DESIGN	83.	-	83.
SYSTEMS	2.	-	2.
PROJECT MGMT	133.	-	133.
DATA	29.	-	29.
SUBTOTAL (ENG)	281.	-	281.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2546.	-	2546.
TOOL-TEST EQ	187.	-	187.
SUBTOTAL (MFG)	2733.	-	2733.
TOTAL COST	3014.	-	3014.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	22.000*	17.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	8.500*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.244*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	48164*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (13)	OCT 92* (3)	JAN 93* (16)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:48
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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UNIT WEIGHT	150.00	MODE	1
PROTOTYPE QUANTITY	2.000	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	12.	-	12.
DESIGN	25.	-	25.
SYSTEMS	0.	-	0.
PROJECT MGMT	34.	-	34.
DATA	9.	-	9.
SUBTOTAL (ENG)	80.	-	80.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	560.	-	560.
TOOL-TEST EQ	32.	-	32.
SUBTOTAL (MFG)	592.	-	592.
TOTAL COST	672.	-	672.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS
EIGHT	5.000*	145.000	ENGINEERING COMPLEXITY 0.200
DENSITY	42.000	24.167*	PROTOTYPE SUPPORT 1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR 0.250*
NEW DESIGN	0.050	0.200	ELECT VOL FRACTION 0.020*
DESIGN REPEAT	0.000	0.800	PLATFORM 2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY 1991*
INTEGRATION LEVEL	0.070	0.070	RELIABILITY FACTOR 1.0
			MTBF (FIELD) 161130*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (8)	MAY 92* (1)	JUN 92* (9)

SUPPLEMENTAL INFORMATION	TOOLING & PROCESS FACTORS
ECONOMIC BASE 192	DEVELOPMENT TOOLING 1.00*
ESCALATION 0.00	
DEV COST MULTIPLIER 1.00*	

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:48
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PROTOTYPE QUANTITY	UNIT WEIGHT	50.00	MODE	1
	7.000 UNIT VOLUME	3.00	QUANTITY/NHA	3

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	160.	-	160.
DESIGN	505.	-	505.
SYSTEMS	30.	-	30.
PROJECT MGMT	130.	-	130.
DATA	36.	-	36.
SUBTOTAL (ENG)	861.	-	861.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1169.	-	1169.
TOOL-TEST EQ	113.	-	113.
SUBTOTAL (MFG)	1282.	-	1282.
TOTAL COST	2143.	-	2143.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	2.000*	48.000	ENGINEERING COMPLEXITY	0.600
DENSITY	49.000	16.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.800	0.200	ELECT VOL FRACTION	0.014*
DESIGN REPEAT	0.200	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.151	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	423050*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92* (5)	FEB 93* (17)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:48
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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PROTOTYPE QUANTITY	UNIT WEIGHT	51.94	MODE	1
	2.000 UNIT VOLUME	2.51	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	772.	-	772.
DESIGN	2638.	-	2638.
SYSTEMS	333.	-	333.
PROJECT MGMT	270.	-	270.
DATA	106.	-	106.
SUBTOTAL (ENG)	4119.	-	4119.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	829.	-	829.
TOOL-TEST EQ	116.	-	116.
SUBTOTAL (MFG)	945.	-	945.
TOTAL COST	5064.	-	5064.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
EIGHT	14.221*	37.716*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.743	7.422	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.162*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	56537*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (2)	APR 93* (19)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:48
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

STRUCTURE, PROPULSION SUBMOD.

	UNIT WEIGHT	100.00	MODE	2
PROTOTYPE QUANTITY	2.000 UNIT VOLUME	38.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	278.	-	278.
DESIGN	930.	-	930.
SYSTEMS	179.	-	179.
PROJECT MGMT	169.	-	169.
DATA	66.	-	66.
SUBTOTAL (ENG)	1622.	-	1622.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	676.	-	676.
TOOL-TEST EQ	72.	-	72.
SUBTOTAL (MFG)	748.	-	748.
TOTAL COST	2370.	-	2370.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	100.000	ENGINEERING COMPLEXITY	1.200
DENSITY	2.632*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.900	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	32912*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (2)	MAR 93* (18)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:48
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PROPULSION DM

	UNIT WEIGHT	141.00	MODE	2
PROTOTYPE QUANTITY	1.300 UNIT VOLUME	10.00	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	89.	-	89.
DESIGN	300.	-	300.
SYSTEMS	38.	-	38.
PROJECT MGMT	216.	-	216.
DATA	52.	-	52.
SUBTOTAL (ENG)	696.	-	696.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	5074.	-	5074.
TOOL-TEST EQ	692.	-	692.
SUBTOTAL (MFG)	5766.	-	5766.
TOTAL COST	6462.	-	6462.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	141.000	ENGINEERING COMPLEXITY	1.000
DENSITY	14.100*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.669	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	PLATFORM	2.000
DESIGN REPEAT	0.800	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	14219*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (24)	SEP 93* (2)	NOV 93* (26)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:49
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

OPULSION SUBMOD. I&T

PROTOTYPE QUANTITY	UNIT WEIGHT	14.28	MODE	2
	2.000 UNIT VOLUME	0.95	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	129.	-	129.
DESIGN	423.	-	423.
SYSTEMS	59.	-	59.
PROJECT MGMT	53.	-	53.
DATA	20.	-	20.
SUBTOTAL (ENG)	684.	-	684.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	256.	-	256.
TOOL-TEST EQ	30.	-	30.
SUBTOTAL (MFG)	287.	-	287.
TOTAL COST	970.	-	970.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	14.276*	ENGINEERING COMPLEXITY	1.000
DENSITY	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	8.576	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	41492*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (2)	FEB 93* (17)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:49
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

C CONTROL DM

PROTOTYPE QUANTITY	UNIT WEIGHT	98.00	MODE	1
	3.800 UNIT VOLUME	5.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	71.	-	71.
DESIGN	226.	-	226.
SYSTEMS	17.	-	17.
PROJECT MGMT	149.	-	149.
DATA	34.	-	34.
SUBTOTAL (ENG)	497.	-	497.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2485.	-	2485.
TOOL-TEST EQ	258.	-	258.
SUBTOTAL (MFG)	2744.	-	2744.
TOTAL COST	3241.	-	3241.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	30.000*	68.000	ENGINEERING COMPLEXITY	0.700
DENSITY	44.000	13.600*	PROTOTYPE SUPPORT	1.0
IFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.150	ELECT VOL FRACTION	0.136*
DESIGN REPEAT	0.800	0.850	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.120	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	27834*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (5)	JUN 93* (21)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192	TOOLING & PROCESS FACTORS	
ESCALATION	0.00	DEVELOPMENT TOOLING	1.00*
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:49
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

GNC GPS DM

	UNIT WEIGHT	10.00	MODE	1
PROTOTYPE QUANTITY	7.000 UNIT VOLUME	0.50	QUANTITY/NHA	4

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	129.	-	129.
DESIGN	425.	-	425.
SYSTEMS	31.	-	31.
PROJECT MGMT	109.	-	109.
DATA	29.	-	29.
SUBTOTAL (ENG)	723.	-	723.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1086.	-	1086.
TOOL-TEST EQ	108.	-	108.
SUBTOTAL (MFG)	1194.	-	1194.
 TOTAL COST	 1917.	 -	 1917.

IGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	8.000*	2.000	ENGINEERING COMPLEXITY	0.700
DENSITY	40.000	4.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.950	ELECT VOL FRACTION	0.400*
DESIGN REPEAT	0.600	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	101657*

SCHEDULE	START		FIRST ITEM		FINISH
DEVELOPMENT	OCT 91	(14)	NOV 92*	(6)	MAY 93* (20)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:49
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

L - ANTENNA DM

	UNIT WEIGHT	1.00	MODE	1
PROTOTYPE QUANTITY	10.000	UNIT VOLUME	0.05	QUANTITY/NHA 7

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	4.	-	4.
DESIGN	10.	-	10.
SYSTEMS	0.	-	0.
PROJECT MGMT	9.	-	9.
DATA	2.	-	2.
SUBTOTAL (ENG)	26.	-	26.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	112.	-	112.
TOOL-TEST EQ	7.	-	7.
SUBTOTAL (MFG)	119.	-	119.
TOTAL COST	145.	-	145.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	0.500*	0.500	ENGINEERING COMPLEXITY	0.300
DENSITY	40.000	10.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.300	0.300	ELECT VOL FRACTION	0.250*
DESIGN REPEAT	0.700	0.700	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	1538786*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(6)	MAR 92*	(3)	JUN 92*	(9)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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INPUT FILENAME: TOTAL      22-AUG-90 18:49      GLOBAL FILENAME:
                        (190172)      ESCALATION FILENAME:

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	UNIT WEIGHT	16.75	MODE	1
PROTOTYPE QUANTITY	6.000 UNIT VOLUME	0.37	QUANTITY/NHA	1

SUPPLEMENTAL INFORMATION			
ECONOMIC BASE	192	TOOLING & PROCESS FACTORS	
ESCALATION	0.00	DEVELOPMENT TOOLING	1.00*
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:49
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

DM I&T

	UNIT WEIGHT	47.06	MODE	1
PROTOTYPE QUANTITY	2.000 UNIT VOLUME	2.05	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	800.	-	800.
DESIGN	2714.	-	2714.
SYSTEMS	349.	-	349.
PROJECT MGMT	283.	-	283.
DATA	111.	-	111.
SUBTOTAL (ENG)	4257.	-	4257.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	865.	-	865.
TOOL-TEST EQ	117.	-	117.
SUBTOTAL (MFG)	981.	-	981.
TOTAL COST	5238.	-	5238.

IGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.283*	30.775*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.546	7.941	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.227*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	46698*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(16)	JAN 93*	(3)	APR 93*	(19)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL

22-AUG-90 18:50
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PAYLOAD ADAPTER

	UNIT WEIGHT	1000.00	MODE	1
PROTOTYPE QUANTITY	5.800 UNIT VOLUME	249.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	502.	-	502.
DESIGN	1575.	-	1575.
SYSTEMS	93.	-	93.
PROJECT MGMT	755.	-	755.
DATA	178.	-	178.
SUBTOTAL (ENG)	3103.	-	3103.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	10374.	-	10374.
TOOL-TEST EQ	966.	-	966.
SUBTOTAL (MFG)	11341.	-	11341.
TOTAL COST	14444.	-	14444.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
EIGHT	5.000*	995.000	ENGINEERING COMPLEXITY	0.600
DENSITY	42.000	3.996*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.200	ELECT VOL FRACTION	0.000*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.134	0.263	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (7)	JUL 93* (22)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
INTEGRATION AND TEST

INPUT FILENAME: TOTAL

22-AUG-90 18:50
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

LOCAL SYSTEM I&T

	INT WEIGHT	82.190*	MODE	5
PROTOTYPE QUANTITY	2.000 INT VOLUME	4.184*	QUANTITY/HNA	0

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1011.	-	1011.
DESIGN	3454.	-	3454.
SYSTEMS	436.	-	436.
PROJECT MGMT	359.	-	359.
DATA	140.	-	140.
SUBTOTAL (ENG)	5401.	-	5401.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1218.	-	1218.
TOOL-TEST EQ	167.	-	167.
SUBTOTAL (MFG)	1385.	-	1385.
TOTAL COST	6786.	-	6786.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	19.430*	62.760*	ENGINEERING COMPLEXITY	1.000*
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.734*	7.659*	PROTO SCHEDULE FACTOR	0.250*
NEW PLANS LEVEL	0.500	0.500	ELECT VOL FRACTION	0.133
INTEGRATION LEVEL	0.000	0.000	PLATFORM	2.000
			YEAR OF TECHNOLOGY	1991*
			RELIABILITY FACTOR	1.0
			MTBF (FIELD)	41531*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (3)	MAY 93* (20)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
AMORTIZED UNIT COST	0.00*
DEV COST MULTIPLIER	1.00*
PROD COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
PRODUCTION TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
SYSTEM COST SUMMARY

INPUT FILENAME: TOTAL

22-AUG-90 18:50
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TOTAL COST, WITH INTEGRATION COST

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	15767.	168.	15935.
DESIGN	54166.	659.	54825.
SYSTEMS	6774.	-	6774.
PROJ MGMT	8524.	172.	8696.
DATA	2787.	86.	2873.
SUBTOTAL (ENG)	88018.	1084.	89103.
MANUFACTURING			
PRODUCTION	-	586.	586.
PROTOTYPE	67057.	-	67057.
TOOL-TEST EQ	7978.	350.	8328.
PURCH ITEMS	0.	0.	0.
SUBTOTAL (MFG)	75035.	935.	75971.
TOTAL COST	163054.	2020.	165073.

Restart the Program (Y/N)?

Hardware System Acquisition

Hardware Acquisition	File Management
1 Enter PRICE H Menu	<CAT>alog Files
2 Create/Modify Input File	<T>ype File
3 Create Custom Global File	<ED>it File
4 Create Custom Escalation File	<D>elete File
5 Run STACK	<R>ename File
6 Enter Parameter Generation Menu	<C>opy File
7 Enter LABOR Subsystem Menu	<PC> File Transfer
8 Run Fiscal Year Conversion	

H Help
Q Return to Main Menu

Enter selection : TOTAL

Enter Input Data Filename: TOTAL

Enter Input Data Filename:

Enter System Integration Filename: If you wish to create a System Integration file

- - - PRICE HARDWARE MODEL - - -

INPUT FILENAME: TOTAL

22-AUG-90 18:59
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
STRCU MM			
TOTAL COST	7478.	-	7478.
POWER MM			
TOTAL COST	5006.	-	5006.
HARNESS MM			
TOTAL COST	2088.	-	2088.
THERMAL MM			
TOTAL COST	5673.	-	5673.
HS MM			
TOTAL COST	11001.	-	11001.
TTC MM			
TOTAL COST	2515.	-	2515.
ECLSS MM			
TOTAL COST	1794.	-	1794.
MM LESS PM I&T			
TOTAL COST	4180.	-	4180.
PM EXP MOD MM			
TOTAL COST	11642.	-	11642.
SPT MOD MM			
TOTAL COST	29154.	-	29154.
PM SPT MOD PRES VESSEL MM			
TOTAL COST	4589.	-	4589.
PM I&T			
TOTAL COST	4809.	2020.	6829.
MM I&T W/PM			
TOTAL COST	4751.	-	4751.
STRUCTURE DM			
TOTAL COST	2457.	-	2457.
POWER DM			
TOTAL COST	7363.	-	7363.
HARNESS DM			
TOTAL COST	1767.	-	1767.
THERMAL DM			
TOTAL COST	482.	-	482.
TTC DM			
TOTAL COST	3014.	-	3014.
R SYS DM			
TOTAL COST	672.	-	672.
AM			
TOTAL COST	2143.	-	2143.
DM LESS GNC I&T			
TOTAL COST	5064.	-	5064.
STRUCTURE, PROPULSION SUBMOD.			
TOTAL COST	2370.	-	2370.
PROPULSION DM			
TOTAL COST	6462.	-	6462.
PROPULSION SUBMOD. I&T			
TOTAL COST	970.	-	970.
GNC CONTROL DM			
TOTAL COST	3241.	-	3241.
GNC GPS DM			
TOTAL COST	1917.	-	1917.
GNC ANTENNA DM			
TOTAL COST	145.	-	145.
GNC I&T			
TOTAL COST	3841.	-	3841.
DM I&T			
TOTAL COST	5238.	-	5238.
PAYLOAD ADAPTER			
TOTAL COST	14444.	-	14444.
TOTAL SYSTEM I&T			
TOTAL COST	6786.	-	6786.

- - - PRICE HARDWARE MODEL - - -
SYSTEM COST SUMMARY

PUT FILENAME: TOTAL

22-AUG-90 18:59
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TOTAL COST, WITH INTEGRATION COST

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	15767.	168.	15935.
DESIGN	54166.	659.	54825.
SYSTEMS	6774.	-	6774.
PROJ MGMT	8524.	172.	8696.
DATA	2787.	86.	2873.
SUBTOTAL (ENG)	88018.	1084.	89103.
MANUFACTURING			
PRODUCTION	-	586.	586.
PROTOTYPE	67057.	-	67057.
TOOL-TEST EQ	7978.	350.	8328.
PURCH ITEMS	0.	0.	0.
SUBTOTAL (MFG)	75035.	935.	75971.
TOTAL COST	163054.	2020.	165073.

- - - PRICE HARDWARE MODEL - - -

INPUT FILENAME: TOTAL

22-AUG-90 18:59
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
STRCU MM			
TOTAL COST	7478.	-	7478.
POWER MM			
TOTAL COST	5006.	-	5006.
HARNESS MM			
TOTAL COST	2088.	-	2088.
THERMAL MM			
TOTAL COST	5673.	-	5673.
HS MM			
TOTAL COST	11001.	-	11001.
TTC MM			
TOTAL COST	2515.	-	2515.
ECLSS MM			
TOTAL COST	1794.	-	1794.
MM LESS PM I&T			
TOTAL COST	4180.	-	4180.
PM EXP MOD MM			
TOTAL COST	11642.	-	11642.
SPT MOD MM			
TOTAL COST	29154.	-	29154.
PM SPT MOD PRES VESSEL MM			
TOTAL COST	4589.	-	4589.
PM I&T			
TOTAL COST	4809.	2020.	6829.
MM I&T W/PM			
TOTAL COST	4751.	-	4751.
STRUCTURE DM			
TOTAL COST	2457.	-	2457.
POWER DM			
TOTAL COST	7363.	-	7363.
HARNESS DM			
TOTAL COST	1767.	-	1767.
THERMAL DM			
TOTAL COST	482.	-	482.
TTC DM			
TOTAL COST	3014.	-	3014.
R SYS DM			
TOTAL COST	672.	-	672.
AM			
TOTAL COST	2143.	-	2143.
DM LESS GNC I&T			
TOTAL COST	5064.	-	5064.
STRUCTURE, PROPULSION SUBMOD.			
TOTAL COST	2370.	-	2370.
PROPULSION DM			
TOTAL COST	6462.	-	6462.
PROPULSION SUBMOD. I&T			
TOTAL COST	970.	-	970.
GNC CONTROL DM			
TOTAL COST	3241.	-	3241.
GNC GPS DM			
TOTAL COST	1917.	-	1917.
GNC ANTENNA DM			
TOTAL COST	145.	-	145.
GNC I&T			
TOTAL COST	3841.	-	3841.
DM I&T			
TOTAL COST	5238.	-	5238.
PAYLOAD ADAPTER			
TOTAL COST	14444.	-	14444.
TOTAL SYSTEM I&T			
TOTAL COST	6786.	-	6786.

- - - PRICE HARDWARE MODEL - - -
SYSTEM COST SUMMARY

INPUT FILENAME: TOTAL

22-AUG-90 18:59
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TOTAL COST, WITH INTEGRATION COST

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	15767.		
DESIGN	54166.	168.	15935.
SYSTEMS	6774.	659.	54825.
PROJ MGMT	8524.	-	6774.
DATA	2787.	172.	8696.
SUBTOTAL (ENG)	88018.	86.	2873.
		1084.	89103.
MANUFACTURING			
PRODUCTION	-		
PROTOTYPE	67057.	586.	586.
TOOL-TEST EQ	7978.	-	67057.
PURCH ITEMS	0.	350.	8328.
SUBTOTAL (MFG)	75035.	0.	0.
		935.	75971.
TOTAL COST	163054.	2020.	165073.

Restart the Program (Y/N)?

Hardware System Acquisition

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      r Input Data Filename:

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- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

GLOBAL FILENAME:
ESCALATION FILENAME:

	UNIT WEIGHT	309.00	MODE	2
PROTOTYPE QUANTITY	4.600	UNIT VOLUME	172.00	QUANTITY/NHA 1

SUPPLEMENTAL INFORMATION			
ECONOMIC BASE	192	TOOLING & PROCESS FACTORS	
INFLATION	0.00	DEVELOPMENT TOOLING	1.00*
COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:24
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

ER MM

PROTOTYPE QUANTITY	UNIT WEIGHT	100.00	MODE	1
	5.200 UNIT VOLUME	1.50	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	8.	-	8.
DESIGN	30.	-	30.
SYSTEMS	3.	-	3.
PROJECT MGMT	249.	-	249.
DATA	46.	-	46.
SUBTOTAL (ENG)	336.	-	336.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	5031.	-	5031.
TOOL-TEST EQ	644.	-	644.
SUBTOTAL (MFG)	5675.	-	5675.
TOTAL COST	6011.	-	6011.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
HEIGHT	32.000*	68.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	45.333*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.810	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.050	0.050	ELECT VOL FRACTION	0.435*
DESIGN REPEAT	0.950	0.950	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	27948*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92* (4)	JAN 93* (16)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS
ECONOMIC BASE	192	DEVELOPMENT TOOLING
ESCALATION	0.00	
DEV COST MULTIPLIER	1.00*	

PRICE ESTIMATE MODEL
ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:24
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

LESS MM

	UNIT WEIGHT	35.00	MODE	1
PROTOTYPE QUANTITY	4.000 UNIT VOLUME	2.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	271.	-	271.
DESIGN	944.	-	944.
SYSTEMS	95.	-	95.
PROJECT MGMT	127.	-	127.
DATA	42.	-	42.
SUBTOTAL (ENG)	1480.	-	1480.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	745.	-	745.
TOOL-TEST EQ	96.	-	96.
SUBTOTAL (MFG)	841.	-	841.
TOTAL COST	2321.	-	2321.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	30.000	ENGINEERING COMPLEXITY	0.900
DENSITY	49.000	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.051*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (4)	APR 93* (19)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:24
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TERMAL MM

PROTOTYPE QUANTITY	UNIT WEIGHT	45.00	MODE	1
	4.600 UNIT VOLUME	1.50	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	888.	-	888.
DESIGN	3185.	-	3185.
SYSTEMS	372.	-	372.
PROJECT MGMT	341.	-	341.
DATA	122.	-	122.
SUBTOTAL (ENG)	4908.	-	4908.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	971.	-	971.
TOOL-TEST EQ	126.	-	126.
SUBTOTAL (MFG)	1097.	-	1097.
TOTAL COST	6004.	-	6004.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WIGHT	6.000*	39.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	26.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.800	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.950	ELECT VOL FRACTION	0.091*
DESIGN REPEAT	0.000	0.300	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	133907*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (6)	JUL 93* (22)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:24
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

1M

	UNIT WEIGHT	421.00	MODE	2
PROTOTYPE QUANTITY	2.900 UNIT VOLUME	11.70	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1725.	-	1725.
DESIGN	5580.	-	5580.
SYSTEMS	823.	-	823.
PROJECT MGMT	771.	-	771.
DATA	285.	-	285.
SUBTOTAL (ENG)	9184.	-	9184.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3029.	-	3029.
TOOL-TEST EQ	277.	-	277.
SUBTOTAL (MFG)	3307.	-	3307.
 TOTAL COST	 12491.	 -	 12491.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	421.000	ENGINEERING COMPLEXITY	1.000
DENSITY	35.983*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	21383*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93* (5)	AUG 93* (23)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:24
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

T 1M

	UNIT WEIGHT	20.00	MODE	1
PROTOTYPE QUANTITY	5.700 UNIT VOLUME	3.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	25.	-	25.
DESIGN	65.	-	65.
SYSTEMS	2.	-	2.
PROJECT MGMT	169.	-	169.
DATA	34.	-	34.
SUBTOTAL(ENG)	294.	-	294.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3098.	-	3098.
TOOL-TEST EQ	220.	-	220.
SUBTOTAL(MFG)	3318.	-	3318.
TOTAL COST	3612.	-	3612.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.000*	4.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	1.333*	PROTOTYPE SUPPORT	1.0
DESIGN COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.119*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	65805*

SCHEDULE	START		FIRST ITEM		FINISH
DEVELOPMENT	OCT 91	(12)	SEP 92*	(5)	FEB 93* (17)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS
ECONOMIC BASE	191*	DEVELOPMENT TOOLING
ESCALATION	0.00	1.00*
DEV COST MULTIPLIER	1.00*	

MECHANICAL ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:24
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

3S MM

	UNIT WEIGHT	127.00	MODE	2
PROTOTYPE QUANTITY	4.100 UNIT VOLUME	6.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	201.	-	201.
DESIGN	628.	-	628.
SYSTEMS	83.	-	83.
PROJECT MGMT	132.	-	132.
DATA	42.	-	42.
SUBTOTAL (ENG)	1088.	-	1088.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	883.	-	883.
TOOL-TEST EQ	70.	-	70.
SUBTOTAL (MFG)	953.	-	953.
TOTAL COST	2041.	-	2041.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	127.000	ENGINEERING COMPLEXITY	0.900
DENSITY	21.167*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.900	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	37694*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(13)	OCT 92*	(5)	MAR 93*	(18)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:25
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	47.30	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	2.75	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	496.	-	496.
DESIGN	1734.	-	1734.
SYSTEMS	211.	-	211.
PROJECT MGMT	189.	-	189.
DATA	70.	-	70.
SUBTOTAL (ENG)	2700.	-	2700.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	676.	-	676.
TOOL-TEST EQ	91.	-	91.
SUBTOTAL (MFG)	766.	-	766.
 TOTAL COST	 3466.	 -	 3466.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	6.034*	41.264*	ENGINEERING COMPLEXITY	1.000
VISIBILITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
DESIGN COMPLEXITY	9.708	7.297	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.063*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	129634*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(14)	NOV 92*	(4)	MAR 93*	(18)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192	TOOLING & PROCESS FACTORS	
ESCALATION	0.00	DEVELOPMENT TOOLING	1.00*
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:25
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	132.00	MODE	1
PROTOTYPE QUANTITY	4.300 UNIT VOLUME	14.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	242.	-	242.
DESIGN	893.	-	893.
SYSTEMS	97.	-	97.
PROJECT MGMT	572.	-	572.
DATA	121.	-	121.
SUBTOTAL (ENG)	1925.	-	1925.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	10852.	-	10852.
TOOL-TEST EQ	1527.	-	1527.
SUBTOTAL (MFG)	12379.	-	12379.
TOTAL COST	14304.	-	14304.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WIGHT	54.000*	78.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	5.571*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.750	ELECT VOL FRACTION	0.088*
DESIGN REPEAT	0.900	0.900	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	19978*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (22)	JUL 93* (7)	FEB 94* (29)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

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UNIT WEIGHT	268.00	MODE	1
PROTOTYPE QUANTITY	4.300	UNIT VOLUME	12.30
		QUANTITY/NHA	1

DESIGN FACTORS		ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	214.000	ENGINEERING COMPLEXITY	1.000	
VISIBILITY	44.000	17.398*	PROTOTYPE SUPPORT	1.0	
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*	
NEW DESIGN	0.600	0.900	ELECT VOL FRACTION	0.100*	
DESIGN REPEAT	0.200	0.200	PLATFORM	2.000	
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*	
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0	
			MTBF (FIELD)	19978*	

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (24)	SEP 93* (8)	MAY 94* (32)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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	UNIT WEIGHT	105.00	MODE	2	
PROTOTYPE QUANTITY	4.300	UNIT VOLUME	28.00	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	667.	-	667.
DESIGN	2202.	-	2202.
SYSTEMS	314.	-	314.
PROJECT MGMT	316.	-	316.
DATA	111.	-	111.
SUBTOTAL (ENG)	3611.	-	3611.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1260.	-	1260.
TOOL-TEST EQ	107.	-	107.
SUBTOTAL (MFG)	1368.	-	1368.
TOTAL COST	4978.	-	4978.

DESIGN FACTORS		MECHANICAL		PRODUCT DESCRIPTORS	
WEIGHT	105.000			ENGINEERING COMPLEXITY	1.000
DENSITY	3.750*			PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682			PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950			PLATFORM	2.000
DESIGN REPEAT	0.000			YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151			RELIABILITY FACTOR	1.0
				MTBF (FIELD)	32434*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (5)	JUN 93* (21)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:25
(190172)

GLOBAL FILENAME:
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	UNIT WEIGHT	34.57	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	1.53	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	742.	-	742.
DESIGN	2627.	-	2627.
SYSTEMS	310.	-	310.
PROJECT MGMT	284.	-	284.
DATA	103.	-	103.
SUBTOTAL (ENG)	4066.	-	4066.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1166.	-	1166.
TOOL-TEST EQ	159.	-	159.
SUBTOTAL (MFG)	1325.	-	1325.
TOTAL COST	5391.	-	5391.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.620*	22.951*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.071	7.363	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.217*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	75715*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (5)	JUL 93* (22)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:25
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	45.61	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	2.27	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	739.	-	739.
DESIGN	2604.	-	2604.
SYSTEMS	311.	-	311.
PROJECT MGMT	284.	-	284.
DATA	103.	-	103.
SUBTOTAL (ENG)	4041.	-	4041.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1124.	-	1124.
TOOL-TEST EQ	151.	-	151.
SUBTOTAL (MFG)	1276.	-	1276.
TOTAL COST	5317.	-	5317.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.574*	34.033*	ENGINEERING COMPLEXITY	1.000
NSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
W G. COMPLEXITY	9.929	7.395	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.146*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	73009*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (4)	JUN 93* (21)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL -
MECHANICAL ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:26
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	50.00	MODE	2
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	39.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	186.	-	186.
DESIGN	636.	-	636.
SYSTEMS	118.	-	118.
PROJECT MGMT	123.	-	123.
DATA	45.	-	45.
SUBTOTAL (ENG)	1108.	-	1108.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	522.	-	522.
TOOL-TEST EQ	51.	-	51.
SUBTOTAL (MFG)	573.	-	573.
TOTAL COST	1682.	-	1682.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	50.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.282*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	40520*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (3)	MAR 93* (18)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

GLOBAL FILENAME:
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31. DM

UNIT WEIGHT	210.00	MODE	1
UNIT VOLUME	3.00	QUANTITY/NHA	2
PROTOTYPE QUANTITY	2.600		

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	796.	-	796.
DESIGN	2795.	-	2795.
SYSTEMS	334.	-	334.
PROJECT MGMT	431.	-	431.
DATA	136.	-	136.
SUBTOTAL (ENG)	4493.	-	4493.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	4214.	-	4214.
TOOL-TEST EQ	576.	-	576.
SUBTOTAL (MFG)	4790.	-	4790.
TOTAL COST	9283.	-	9283.

DESIGN FACTORS		ELECTRONIC MECHANICAL		PRODUCT DESCRIPTORS	
WEIGHT	40.000*	170.000	ENGINEERING COMPLEXITY	1.000	
DENSITY	49.000	56.667*	PROTOTYPE SUPPORT	1.0	
MFG. COMPLEXITY	10.057	7.954	PROTO SCHEDULE FACTOR	0.250*	
NEW DESIGN	0.500	0.200	ELECT VOL FRACTION	0.272*	
DESIGN REPEAT	0.500	0.800	PLATFORM	2.000	
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*	
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0	
			MTBF (FIELD)	22458*	

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (20)	MAY 93* (5)	OCT 93* (25)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:26
(190172)

GLOBAL FILENAME:
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PROTOTYPE QUANTITY	UNIT WEIGHT	50.00	MODE	1
	2.200 UNIT VOLUME	4.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	295.	-	295.
DESIGN	994.	-	994.
SYSTEMS	106.	-	106.
PROJECT MGMT	115.	-	115.
DATA	43.	-	43.
SUBTOTAL(ENG)	1553.	-	1553.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	493.	-	493.
TOOL-TEST EQ	70.	-	70.
SUBTOTAL(MFG)	563.	-	563.
TOTAL COST	2116.	-	2116.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	45.000	ENGINEERING COMPLEXITY	0.900
DENSITY	49.000	11.250*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.026*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (2)	FEB 93* (17)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:26
(190172)

GLOBAL FILENAME:
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PROTOTYPE QUANTITY	UNIT WEIGHT	10.00	MODE	2
	2.100 UNIT VOLUME	0.20	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	95.	-	95.
DESIGN	293.	-	293.
SYSTEMS	47.	-	47.
PROJECT MGMT	37.	-	37.
DATA	15.	-	15.
SUBTOTAL (ENG)	486.	-	486.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	56.	-	56.
TOOL-TEST EQ	7.	-	7.
SUBTOTAL (MFG)	63.	-	63.
TOTAL COST	550.	-	550.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	10.000	ENGINEERING COMPLEXITY	1.000
DENSITY	50.000*	PROTOTYPE SUPPORT	1.0
DESIGN COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	80800*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91	AUG 92* (2)	OCT 92* (13)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:26
(190172)

GLOBAL FILENAME:
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	UNIT WEIGHT	39.00	MODE	1
PROTOTYPE QUANTITY	4.900 UNIT VOLUME	2.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	34.	-	34.
DESIGN	89.	-	89.
SYSTEMS	2.	-	2.
PROJECT MGMT	215.	-	215.
DATA	44.	-	44.
SUBTOTAL (ENG)	383.	-	383.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3990.	-	3990.
TOOL-TEST EQ	285.	-	285.
SUBTOTAL (MFG)	4275.	-	4275.
TOTAL COST	4659.	-	4659.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	22.000*	17.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	8.500*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.244*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	48164*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (13)	OCT 92* (5)	MAR 93* (18)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:26
(190172)

GLOBAL FILENAME:
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	UNIT WEIGHT	150.00	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	6.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	12.	-	12.
DESIGN	26.	-	26.
SYSTEMS	0.	-	0.
PROJECT MGMT	49.	-	49.
DATA	11.	-	11.
SUBTOTAL (ENG)	99.	-	99.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	797.	-	797.
TOOL-TEST EQ	43.	-	43.
SUBTOTAL (MFG)	840.	-	840.
TOTAL COST	939.	-	939.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WIGHT	5.000*	145.000	ENGINEERING COMPLEXITY	0.200
ENSITY	42.000	24.167*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.050	0.200	ELECT VOL FRACTION	0.020*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	161130*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(8)	MAY 92*	(2)	JUL 92*	(10)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

GLOBAL FILENAME:
ESCALATION FILENAME:

		UNIT WEIGHT	50.00	MODE	1
PROTOTYPE QUANTITY	10.000	UNIT VOLUME	3.00	QUANTITY/NHA	3

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	163.	-	163.
DESIGN	521.	-	521.
SYSTEMS	30.	-	30.
PROJECT MGMT	160.	-	160.
DATA	41.	-	41.
SUBTOTAL (ENG)	914.	-	914.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1608.	-	1608.
TOOL-TEST EQ	151.	-	151.
SUBTOTAL (MFG)	1759.	-	1759.
TOTAL COST	2673.	-	2673.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	2.000*	48.000	ENGINEERING COMPLEXITY	0.600
DENSITY	49.000	16.000*	PROTOTYPE SUPPORT	1.0
LOG. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.800	0.200	ELECT VOL FRACTION	0.014*
DESIGN REPEAT	0.200	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.151	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	423050*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92* (6)	MAR 93* (18)

SUPPLEMENTAL INFORMATION			
ECONOMIC BASE	192	TOOLING & PROCESS FACTORS	
ESCALATION	0.00	DEVELOPMENT TOOLING	1.00*
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:27
(190172)

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C LESS GNC I&T

	UNIT WEIGHT	48.43	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	2.28	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	785.	-	785.
DESIGN	2749.	-	2749.
SYSTEMS	334.	-	334.
PROJECT MGMT	302.	-	302.
DATA	110.	-	110.
SUBTOTAL (ENG)	4280.	-	4280.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1147.	-	1147.
TOOL-TEST EQ	150.	-	150.
SUBTOTAL (MFG)	1298.	-	1298.
TOTAL COST	5578.	-	5578.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	14.221*	34.208*	ENGINEERING COMPLEXITY	1.000
NSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.743	7.422	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.178*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	56537*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (4)	JUN 93* (21)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:27
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

STRUCTURE, PROPULSION SUBMOD.

PROTOTYPE QUANTITY	UNIT WEIGHT	150.00	MODE	2
	UNIT VOLUME	38.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	381.	-	381.
DESIGN	1304.	-	1304.
SYSTEMS	241.	-	241.
PROJECT MGMT	273.	-	273.
DATA	97.	-	97.
SUBTOTAL (ENG)	2296.	-	2296.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1373.	-	1373.
TOOL-TEST EQ	135.	-	135.
SUBTOTAL (MFG)	1508.	-	1508.
TOTAL COST	3804.	-	3804.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WIGHT	150.000	ENGINEERING COMPLEXITY	1.200
DENSITY	3.947*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.900	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	29143*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (5)	JUN 93* (21)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:27
(190172)

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	UNIT WEIGHT	141.00	MODE	2
PROTOTYPE QUANTITY	2.300 UNIT VOLUME	10.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	93.	-	93.
DESIGN	327.	-	327.
SYSTEMS	39.	-	39.
PROJECT MGMT	377.	-	377.
DATA	81.	-	81.
SUBTOTAL (ENG)	917.	-	917.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	8190.	-	8190.
TOOL-TEST EQ	1062.	-	1062.
SUBTOTAL (MFG)	9252.	-	9252.
 TOTAL COST	 10169.	 -	 10169.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
EIGHT	141.000	ENGINEERING COMPLEXITY	1.000
DENSITY	14.100*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.669	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	PLATFORM	2.000
DESIGN REPEAT	0.800	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	14219*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (24)	SEP 93* (5)	FEB 94* (29)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:27
(190172)

GLOBAL FILENAME:
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CONVERSION SUBMOD. I&T

	UNIT WEIGHT	17.78	MODE	2
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	1.19	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING		-	144.
DRAFTING	144.	-	483.
DESIGN	483.	-	65.
SYSTEMS	65.	-	68.
PROJECT MGMT	68.	-	24.
DATA	24.	-	784.
SUBTOTAL (ENG)	784.		
MANUFACTURING		-	-
PRODUCTION	-	-	386.
PROTOTYPE	386.	-	41.
TOOL-TEST EQ	41.	-	427.
SUBTOTAL (MFG)	427.		
TOTAL COST	1210.	-	1210.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	17.784*	ENGINEERING COMPLEXITY	1.000
DENSITY	15.000*	PROTOTYPE SUPPORT	1.0
CFG. COMPLEXITY	8.436	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	40944*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (4)	APR 93* (19)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

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22-AUG-90 21:27
(190172)GLOBAL FILENAME:
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GNC CONTROL DM

	UNIT WEIGHT	98.00	MODE	1
PROTOTYPE QUANTITY	5.800 UNIT VOLUME	5.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	73.	-	73.
DESIGN	237.	-	237.
SYSTEMS	17.	-	17.
PROJECT MGMT	215.	-	215.
DATA	45.	-	45.
SUBTOTAL (ENG)	586.	-	586.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3587.	-	3587.
TOOL-TEST EQ	359.	-	359.
SUBTOTAL (MFG)	3946.	-	3946.
TOTAL COST	4533.	-	4533.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	30.000*	68.000	ENGINEERING COMPLEXITY	0.700
DENSITY	44.000	13.600*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.150	ELECT VOL FRACTION	0.136*
DESIGN REPEAT	0.800	0.850	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.120	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	27834*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(16)	JAN 93*	(6)	JUL 93*	(22)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:28
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

GPS DM

	UNIT WEIGHT	10.00	MODE	1
PROTOTYPE QUANTITY	11.000 UNIT VOLUME	0.50	QUANTITY/NHA	4

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	132.	-	132.
DESIGN	441.	-	441.
SYSTEMS	31.	-	31.
PROJECT MGMT	144.	-	144.
DATA	35.	-	35.
SUBTOTAL (ENG)	784.	-	784.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1618.	-	1618.
TOOL-TEST EQ	157.	-	157.
SUBTOTAL (MFG)	1775.	-	1775.
TOTAL COST	2559.	-	2559.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
EIGHT	8.000*	2.000	ENGINEERING COMPLEXITY	0.700
DENSITY	40.000	4.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.950	ELECT VOL FRACTION	0.400*
DESIGN REPEAT	0.600	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	101657*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (14)	NOV 92* (7)	JUN 93* (21)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

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22-AUG-90 21:28
(190172)

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IC ANTENNA DM

	UNIT WEIGHT	1.00	MODE	1
PROTOTYPE QUANTITY	17.000	UNIT VOLUME	0.05	QUANTITY/NHA 7

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING	4.	-	4.
DRAFTING	11.	-	11.
DESIGN	0.	-	0.
SYSTEMS	13.	-	13.
PROJECT MGMT	3.	-	3.
DATA	32.	-	32.
SUBTOTAL (ENG)			
MANUFACTURING	-	-	-
PRODUCTION	180.	-	180.
PROTOTYPE	11.	-	11.
TOOL-TEST EQ	190.	-	190.
SUBTOTAL (MFG)			
TOTAL COST	222.	-	222.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	0.500*	0.500	ENGINEERING COMPLEXITY	0.300
COMPLEXITY	40.000	10.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.300	0.300	ELECT VOL FRACTION	0.250*
DESIGN REPEAT	0.700	0.700	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	1538786*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (6)	MAR 92* (3)	JUN 92* (9)

SUPPLEMENTAL INFORMATION	TOOLING & PROCESS FACTORS
ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*
	DEVELOPMENT TOOLING 1.00*

PRICE HARDWARE MODEL
ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:28
(190172)

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	UNIT WEIGHT	16.75	MODE	1
PROTOTYPE QUANTITY	10.000 UNIT VOLUME	0.37	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			516.
DRAFTING	516.	-	516.
DESIGN	1875.	-	1875.
SYSTEMS	218.	-	218.
PROJECT MGMT	266.	-	266.
DATA	82.	-	82.
SUBTOTAL (ENG)	2957.	-	2957.
MANUFACTURING			-
PRODUCTION	-	-	-
PROTOTYPE	1453.	-	1453.
TOOL-TEST EQ	159.	-	159.
SUBTOTAL (MFG)	1612.	-	1612.
TOTAL COST	4569.	-	4569.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.194*	5.553*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
DESIGN COMPLEXITY	9.256	6.853	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.864*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	61724*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (14)	NOV 92* (8)	JUL 93* (22)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:28
(190172)

GLOBAL FILENAME:
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	UNIT WEIGHT	47.07	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	2.05	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	823.	-	823.
DESIGN	2862.	-	2862.
SYSTEMS	354.	-	354.
PROJECT MGMT	321.	-	321.
DATA	118.	-	118.
SUBTOTAL(ENG)	4478.	-	4478.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1221.	-	1221.
TOOL-TEST EQ	154.	-	154.
SUBTOTAL(MFG)	1376.	-	1376.
TOTAL COST	5853.	-	5853.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.283*	30.791*	ENGINEERING COMPLEXITY	1.000
VSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
W.G. COMPLEXITY	9.546	7.938	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.227*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	46698*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (4)	MAY 93* (20)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL4

22-AUG-90 21:28
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	1000.00	MODE	1
PROTOTYPE QUANTITY	6.800 UNIT VOLUME	249.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING	506.	-	506.
DRAFTING	1599.	-	1599.
DESIGN	94.	-	94.
SYSTEMS	855.	-	855.
PROJECT MGMT	195.	-	195.
DATA	3248.	-	3248.
SUBTOTAL (ENG)			
MANUFACTURING	-	-	-
PRODUCTION	11946.	-	11946.
PROTOTYPE	1105.	-	1105.
TOOL-TEST EQ	13050.	-	13050.
SUBTOTAL (MFG)			
TOTAL COST	16298.	-	16298.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	995.000	ENGINEERING COMPLEXITY	0.600
DENSITY	42.000	3.996*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.200	ELECT VOL FRACTION	0.000*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.134	0.263	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (7)	JUL 93* (22)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

INTEGRATION AND TEST

INPUT FILENAME: TOTAL4

22-AUG-90 21:28
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TOTAL SYSTEM I&T

PROTOTYPE QUANTITY	INT WEIGHT 3.000	INT VOLUME	82.197* MODE 4.184* QUANTITY/HNA	5 0
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PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1041.	-	1041.
DESIGN	3643.	-	3643.
SYSTEMS	443.	-	443.
PROJECT MGMT	410.	-	410.
DATA	148.	-	148.
SUBTOTAL (ENG)	5684.	-	5684.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1720.	-	1720.
TOOL-TEST EQ	222.	-	222.
SUBTOTAL (MFG)	1942.	-	1942.
TOTAL COST	7626.	-	7626.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	19.430*	62.767*	ENGINEERING COMPLEXITY	1.000*
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
CG. COMPLEXITY	9.734*	7.658*	PROTO SCHEDULE FACTOR	0.250*
PLANS LEVEL	0.500	0.500	ELECT VOL FRACTION	0.133
INTEGRATION LEVEL	0.000	0.000	PLATFORM	2.000
			YEAR OF TECHNOLOGY	1991*
			RELIABILITY FACTOR	1.0
			MTBF (FIELD)	41531*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (5)	JUL 93* (22)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
AMORTIZED UNIT COST	0.00*
DEV COST MULTIPLIER	1.00*
PROD COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*
PRODUCTION TOOLING	1.00*

SYSTEM COST SUMMARY

INPUT FILENAME: TOTAL4

22-AUG-90 21:29
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

TOTAL COST, WITH INTEGRATION COST

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	16005.	-	16005.
DESIGN	55721.	-	55721.
SYSTEMS	6820.	-	6820.
PROJ MGMT	9998.	-	9998.
DATA	3039.	-	3039.
SUBTOTAL (ENG)	91583.	-	91583.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	89416.	-	89416.
TOOL-TEST EQ	10286.	-	10286.
PURCH ITEMS	0.	-	0.
SUBTOTAL (MFG)	99701.	-	99701.
TOTAL COST	191284.	-	191284.

Run 5 all quantities set at 1; gives unit costs

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

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22-AUG-90 22:04
(190172)

GLOBAL FILENAME:
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STRCU MM

PROTOTYPE QUANTITY	UNIT WEIGHT	309.00	MODE	2
	1.000 UNIT VOLUME	172.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	613.	-	613.
DESIGN	1939.	-	1939.
SYSTEMS	405.	-	405.
PROJECT MGMT	304.	-	304.
DATA	138.	-	138.
SUBTOTAL (ENG)	3399.	-	3399.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1012.	-	1012.
TOOL-TEST EQ	119.	-	119.
SUBTOTAL (MFG)	1130.	-	1130.
TOTAL COST	4529.	-	4529.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	309.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.797*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	23462*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93* (0)	MAR 93* (18)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:04
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PC MM

	UNIT WEIGHT	100.00	MODE	1
PROTOTYPE QUANTITY	1.000	UNIT VOLUME	1.50	QUANTITY/NHA
				1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	7.	-	7.
DESIGN	24.	-	24.
SYSTEMS	3.	-	3.
PROJECT MGMT	47.	-	47.
DATA	11.	-	11.
SUBTOTAL (ENG)	92.	-	92.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1245.	-	1245.
TOOL-TEST EQ	203.	-	203.
SUBTOTAL (MFG)	1447.	-	1447.
TOTAL COST	1540.	-	1540.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	32.000*	68.000	ENGINEERING COMPLEXITY	1.000
VSITY	49.000	45.333*	PROTOTYPE SUPPORT	1.0
UG. COMPLEXITY	10.057	7.810	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.050	0.050	ELECT VOL FRACTION	0.435*
DESIGN REPEAT	0.950	0.950	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	27948*

SCHEDULE	START		FIRST ITEM		FINISH
DEVELOPMENT	OCT 91	(12)	SEP 92*	(0)	SEP 92* (12)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS
ECONOMIC BASE	192	DEVELOPMENT TOOLING
ESCALATION	0.00	1.00*
DEV COST MULTIPLIER	1.00*	

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:04
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

H. LESS MM

	UNIT WEIGHT	35.00	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	2.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	244.	-	244.
DESIGN	775.	-	775.
SYSTEMS	90.	-	90.
PROJECT MGMT	77.	-	77.
DATA	34.	-	34.
SUBTOTAL(ENG)	1221.	-	1221.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	231.	-	231.
TOOL-TEST EQ	40.	-	40.
SUBTOTAL(MFG)	271.	-	271.
TOTAL COST	1492.	-	1492.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	30.000	ENGINEERING COMPLEXITY	0.900
VSITY	49.000	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.051*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (0)	DEC 92* (15)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

22-AUG-90 22:04
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

T 1AL MM

	UNIT WEIGHT	45.00	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	1.50	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	794.	-	794.
DESIGN	2573.	-	2573.
SYSTEMS	351.	-	351.
PROJECT MGMT	226.	-	226.
DATA	103.	-	103.
SUBTOTAL (ENG)	4048.	-	4048.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	266.	-	266.
TOOL-TEST EQ	48.	-	48.
SUBTOTAL (MFG)	314.	-	314.
TOTAL COST	4362.	-	4362.

DESIGN FACTORS		ELECTRONIC MECHANICAL		PRODUCT DESCRIPTORS	
WEIGHT	6.000*	39.000	ENGINEERING COMPLEXITY	1.000	
DENSITY	44.000	26.000*	PROTOTYPE SUPPORT	1.0	
ENG. COMPLEXITY	9.800	7.200	PROTO SCHEDULE FACTOR	0.250*	
NEW DESIGN	0.950	0.950	ELECT VOL FRACTION	0.091*	
DESIGN REPEAT	0.000	0.300	PLATFORM	2.000	
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*	
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0	
			MTBF (FIELD)	133907*	

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (0)	JAN 93* (16)

SUPPLEMENTAL INFORMATION			
ECONOMIC BASE	192	TOOLING & PROCESS FACTORS	
ESCALATION	0.00	DEVELOPMENT TOOLING	1.00*
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:04
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	421.00	MODE	2
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	11.70	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1587.	-	1587.
DESIGN	4753.	-	4753.
SYSTEMS	788.	-	788.
PROJECT MGMT	537.	-	537.
DATA	245.	-	245.
SUBTOTAL (ENG)	7910.	-	7910.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1217.	-	1217.
TOOL-TEST EQ	146.	-	146.
SUBTOTAL (MFG)	1363.	-	1363.
TOTAL COST	9273.	-	9273.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	421.000	ENGINEERING COMPLEXITY	1.000
NSITY	35.983*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	21383*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93* (0)	MAR 93* (18)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:04
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TTC MM

	UNIT WEIGHT	20.00	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	3.00	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	22.	-	22.
DESIGN	51.	-	51.
SYSTEMS	1.	-	1.
PROJECT MGMT	36.	-	36.
DATA	10.	-	10.
SUBTOTAL (ENG)	121.	-	121.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	713.	-	713.
TOOL-TEST EQ	59.	-	59.
SUBTOTAL (MFG)	772.	-	772.
 TOTAL COST	 892.	 -	 892.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.000*	4.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	1.333*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.119*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	65805*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92* (0)	SEP 92* (12)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	191*	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

MECHANICAL ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:04
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

ECLSS MM

	UNIT WEIGHT	127.00	MODE	2
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	6.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	181.	-	181.
DESIGN	514.	-	514.
SYSTEMS	79.	-	79.
PROJECT MGMT	72.	-	72.
DATA	32.	-	32.
SUBTOTAL(ENG)	878.	-	878.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	261.	-	261.
TOOL-TEST EQ	32.	-	32.
SUBTOTAL(MFG)	293.	-	293.
TOTAL COST	1171.	-	1171.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	127.000	ENGINEERING COMPLEXITY	0.900
DENSITY	21.167*	PROTOTYPE SUPPORT	1.0
WG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.900	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	37694*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(13)	OCT 92*	(0)	OCT 92*	(13)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:04
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

LESS PM I&T

	UNIT WEIGHT	47.30	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	2.75	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	455.	-	455.
DESIGN	1471.	-	1471.
SYSTEMS	202.	-	202.
PROJECT MGMT	135.	-	135.
DATA	61.	-	61.
SUBTOTAL (ENG)	2323.	-	2323.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	268.	-	268.
TOOL-TEST EQ	46.	-	46.
SUBTOTAL (MFG)	314.	-	314.
TOTAL COST	2637.	-	2637.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	6.034*	41.264*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.708	7.297	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.063*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	129634*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (14)	NOV 92* (0)	NOV 92* (14)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

PRICE HARDWARE MODEL
ELECTRONIC ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:05
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PT P MOD MM

	UNIT WEIGHT	132.00	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	14.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	217.	-	217.
DESIGN	726.	-	726.
SYSTEMS	92.	-	92.
PROJECT MGMT	167.	-	167.
DATA	51.	-	51.
SUBTOTAL (ENG)	1253.	-	1253.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3186.	-	3186.
TOOL-TEST EQ	518.	-	518.
SUBTOTAL (MFG)	3704.	-	3704.
TOTAL COST	4957.	-	4957.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	78.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	5.571*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.750	ELECT VOL FRACTION	0.088*
DESIGN REPEAT	0.900	0.900	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	19978*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (22)	JUL 93* (0)	JUL 93* (22)

SUPPLEMENTAL INFORMATION	TOOLING & PROCESS FACTORS
ECONOMIC BASE 192	DEVELOPMENT TOOLING 1.00*
ESCALATION 0.00	
DEV COST MULTIPLIER 1.00*	

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTALS

22-AUG-90 22:05
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

MOD MM

	UNIT WEIGHT	268.00	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	12.30	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	2905.	-	2905.
DESIGN	9723.	-	9723.
SYSTEMS	1226.	-	1226.
PROJECT MGMT	880.	-	880.
DATA	377.	-	377.
SUBTOTAL (ENG)	15111.	-	15111.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3614.	-	3614.
TOOL-TEST EQ	594.	-	594.
SUBTOTAL (MFG)	4208.	-	4208.
TOTAL COST	19319.	-	19319.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	214.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	17.398*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.600	0.900	ELECT VOL FRACTION	0.100*
DESIGN REPEAT	0.200	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	19978*

SCHEDULE	START		FIRST ITEM		FINISH
DEVELOPMENT	OCT 91	(24)	SEP 93*	(0)	SEP 93* (24)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS
ECONOMIC BASE	192	DEVELOPMENT TOOLING
ESCALATION	0.00	
DEV COST MULTIPLIER	1.00*	1.00*

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTALS

22-AUG-90 22:05
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PM SPT MOD PRES VESSEL MM

	UNIT WEIGHT	105.00	MODE	2
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	28.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	598.	-	598.
DESIGN	1792.	-	1792.
SYSTEMS	297.	-	297.
PROJECT MGMT	198.	-	198.
DATA	91.	-	91.
SUBTOTAL (ENG)	2978.	-	2978.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	359.	-	359.
TOOL-TEST EQ	42.	-	42.
SUBTOTAL (MFG)	401.	-	401.
TOTAL COST	3378.	-	3378.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
IGHT	105.000	ENGINEERING COMPLEXITY	1.000
DENSITY	3.750*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	32434*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (0)	JAN 93* (16)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

INPUT FILENAME: TOTAL5

22-AUG-90 22:05
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PM I&T

PROTOTYPE QUANTITY	UNIT WEIGHT	34.57	MODE	1
	1.000 UNIT VOLUME	1.53	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	681.	-	681.
DESIGN	2228.	-	2228.
SYSTEMS	297.	-	297.
PROJECT MGMT	200.	-	200.
DATA	89.	-	89.
SUBTOTAL (ENG)	3494.	-	3494.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	464.	-	464.
TOOL-TEST EQ	77.	-	77.
SUBTOTAL (MFG)	541.	-	541.
TOTAL COST	4035.	-	4035.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.620*	22.951*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.071	7.363	PROTO SCHEDULE FACTOR	0.250*
EW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.217*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	75715*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (0)	FEB 93* (17)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192	TOOLING & PROCESS FACTORS	
ESCALATION	0.00	DEVELOPMENT TOOLING	1.00*
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:05
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

M. 1&T W/PM

	UNIT WEIGHT	45.61	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	2.27	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	678.	-	678.
DESIGN	2209.	-	2209.
SYSTEMS	298.	-	298.
PROJECT MGMT	200.	-	200.
DATA	89.	-	89.
SUBTOTAL (ENG)	3474.	-	3474.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	446.	-	446.
TOOL-TEST EQ	74.	-	74.
SUBTOTAL (MFG)	521.	-	521.
TOTAL COST	3994.	-	3994.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
TIGHT	11.574*	34.033*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.929	7.395	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.146*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	73009*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (0)	FEB 93* (17)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

NFUT FILENAME: TOTAL5

22-AUG-90 22:05
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	50.00	MODE	2
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	39.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	171.	-	171.
DESIGN	539.	-	539.
SYSTEMS	113.	-	113.
PROJECT MGMT	81.	-	81.
DATA	38.	-	38.
SUBTOTAL (ENG)	941.	-	941.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	204.	-	204.
TOOL-TEST EQ	26.	-	26.
SUBTOTAL (MFG)	230.	-	230.
TOTAL COST	1170.	-	1170.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	50.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.282*	PROTOTYPE SUPPORT	1.0
FG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	40520*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (0)	DEC 92* (15)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTALS

22-AUG-90 22:06
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	210.00	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	3.00	QUANTITY/NHA	2

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	738.	-	738.
DESIGN	2414.	-	2414.
SYSTEMS	322.	-	322.
PROJECT MGMT	267.	-	267.
DATA	108.	-	108.
SUBTOTAL (ENG)	3848.	-	3848.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1893.	-	1893.
TOOL-TEST EQ	305.	-	305.
SUBTOTAL (MFG)	2197.	-	2197.
TOTAL COST	6045.	-	6045.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	40.000*	170.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	56.667*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.954	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.200	ELECT VOL FRACTION	0.272*
DESIGN REPEAT	0.500	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	22458*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (20)	MAY 93* (0)	MAY 93* (20)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:06
(190172)

GLOBAL FILENAME:
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HARNESS DM

	UNIT WEIGHT	50.00	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	4.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	277.	-	277.
DESIGN	878.	-	878.
SYSTEMS	103.	-	103.
PROJECT MGMT	87.	-	87.
DATA	38.	-	38.
SUBTOTAL (ENG)	1383.	-	1383.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	255.	-	255.
TOOL-TEST EQ	44.	-	44.
SUBTOTAL (MFG)	299.	-	299.
TOTAL COST	1682.	-	1682.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
IGHT	5.000*	45.000	ENGINEERING COMPLEXITY	0.900
ENSITY	49.000	11.250*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.026*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(15)	DEC 92*	(0)	DEC 92*	(15)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:06
(190172)

GLOBAL FILENAME:
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T. 1AL DM

	UNIT WEIGHT	10.00	MODE	2
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	0.20	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	89.	-	89.
DESIGN	260.	-	260.
SYSTEMS	46.	-	46.
PROJECT MGMT	30.	-	30.
DATA	14.	-	14.
SUBTOTAL (ENG)	439.	-	439.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	30.	-	30.
TOOL-TEST EQ	5.	-	5.
SUBTOTAL (MFG)	35.	-	35.
TOTAL COST	474.	-	474.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	10.000	ENGINEERING COMPLEXITY	1.000
NSITY	50.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	80800*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (11)	AUG 92* (0)	AUG 92* (11)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

PRICE HARDWARE MODEL
ELECTRONIC ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:06
(190172)

GLOBAL FILENAME:
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TM DM

	UNIT WEIGHT	39.00	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	2.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	30.	-	30.
DESIGN	71.	-	71.
SYSTEMS	2.	-	2.
PROJECT MGMT	52.	-	52.
DATA	15.	-	15.
SUBTOTAL (ENG)	170.	-	170.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1047.	-	1047.
TOOL-TEST EQ	86.	-	86.
SUBTOTAL (MFG)	1132.	-	1132.
TOTAL COST	1303.	-	1303.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	22.000*	17.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	8.500*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.244*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	48164*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(13)	OCT 92*	(0)	OCT 92*	(13)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

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22-AUG-90 22:06
(190172)

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R 3 DM

	UNIT WEIGHT	150.00	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	6.00	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	11.	-	11.
DESIGN	22.	-	22.
SYSTEMS	0.	-	0.
PROJECT MGMT	19.	-	19.
DATA	6.	-	6.
SUBTOTAL (ENG)	59.	-	59.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	310.	-	310.
TOOL-TEST EQ	20.	-	20.
SUBTOTAL (MFG)	330.	-	330.
TOTAL COST	388.	-	388.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	145.000	ENGINEERING COMPLEXITY	0.200
NSITY	42.000	24.167*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.050	0.200	ELECT VOL FRACTION	0.020*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	161130*

SCHEDULE	START		FIRST ITEM		FINISH
DEVELOPMENT	OCT 91	(8)	MAY 92*	(0)	MAY 92* (8)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:06
(190172)

GLOBAL FILENAME:
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	UNIT WEIGHT	50.00	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	3.00	QUANTITY/NHA	3

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	140.	-	140.
DESIGN	392.	-	392.
SYSTEMS	28.	-	28.
PROJECT MGMT	55.	-	55.
DATA	23.	-	23.
SUBTOTAL (ENG)	638.	-	638.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	216.	-	216.
TOOL-TEST EQ	29.	-	29.
SUBTOTAL (MFG)	245.	-	245.
TOTAL COST	883.	-	883.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	2.000*	48.000	ENGINEERING COMPLEXITY	0.600
DENSITY	49.000	16.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.800	0.200	ELECT VOL FRACTION	0.014*
DESIGN REPEAT	0.200	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.151	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	423050*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92* (0)	SEP 92* (12)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

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22-AUG-90 22:07
(190172)

GLOBAL FILENAME:
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DMLESS GNC I&T

	UNIT WEIGHT	48.43	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	2.28	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	720.	-	720.
DESIGN	2331.	-	2331.
SYSTEMS	320.	-	320.
PROJECT MGMT	214.	-	214.
DATA	96.	-	96.
SUBTOTAL(ENG)	3681.	-	3681.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	455.	-	455.
TOOL-TEST EQ	74.	-	74.
SUBTOTAL(MFG)	529.	-	529.
 TOTAL COST	 4210.	 -	 4210.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
IGHT	14.221*	34.208*	ENGINEERING COMPLEXITY	1.000
NSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.743	7.422	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.178*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	56537*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (0)	FEB 93* (17)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:07
(190172)

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E CONTROL DM

	UNIT WEIGHT	98.00	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	5.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	64.	-	64.
DESIGN	187.	-	187.
SYSTEMS	16.	-	16.
PROJECT MGMT	51.	-	51.
DATA	16.	-	16.
SUBTOTAL (ENG)	334.	-	334.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	805.	-	805.
TOOL-TEST EQ	105.	-	105.
SUBTOTAL (MFG)	909.	-	909.
 TOTAL COST	 1244.	 -	 1244.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	30.000*	68.000	ENGINEERING COMPLEXITY	0.700
DENSITY	44.000	13.600*	PROTOTYPE SUPPORT	1.0
3. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.150	ELECT VOL FRACTION	0.136*
DESIGN REPEAT	0.800	0.850	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.120	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	27834*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(16)	JAN 93*	(0)	JAN 93*	(16)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

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22-AUG-90 22:07
(190172)

GLOBAL FILENAME:
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C GPS DM

	UNIT WEIGHT	10.00	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	0.50	QUANTITY/NHA	4

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	113.	-	113.
DESIGN	329.	-	329.
SYSTEMS	29.	-	29.
PROJECT MGMT	44.	-	44.
DATA	18.	-	18.
SUBTOTAL (ENG)	533.	-	533.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	207.	-	207.
TOOL-TEST EQ	28.	-	28.
SUBTOTAL (MFG)	235.	-	235.
TOTAL COST	767.	-	767.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	8.000*	2.000	ENGINEERING COMPLEXITY	0.700
DENSITY	40.000	4.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.950	ELECT VOL FRACTION	0.400*
DESIGN REPEAT	0.600	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	101657*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (14)	NOV 92* (0)	NOV 92* (14)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:07
(190172)

GLOBAL FILENAME:
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31 ANTENNA DM

	UNIT WEIGHT	1.00	MODE	1
PROTOTYPE QUANTITY	1.000	UNIT VOLUME	0.05	QUANTITY/NHA 7

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	3.	-	3.
DESIGN	8.	-	8.
SYSTEMS	0.	-	0.
PROJECT MGMT	2.	-	2.
DATA	1.	-	1.
SUBTOTAL (ENG)	15.	-	15.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	16.	-	16.
TOOL-TEST EQ	1.	-	1.
SUBTOTAL (MFG)	17.	-	17.
TOTAL COST	32.	-	32.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	0.500*	0.500	ENGINEERING COMPLEXITY	0.300
DENSITY	40.000	10.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.300	0.300	ELECT VOL FRACTION	0.250*
DESIGN REPEAT	0.700	0.700	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	1538786*

SCHEDULE	START		FIRST ITEM		FINISH
DEVELOPMENT	OCT 91	(6)	MAR 92*	(0)	MAR 92* (6)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

PRICE HANDLING COSTS
ELECTRONIC ITEM

INPUT FILENAME: TOTALS

22-AUG-90 22:07
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	16.75	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	0.37	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING		-	443.
DRAFTING	443.	-	1410.
DESIGN	1410.	-	201.
SYSTEMS	201.	-	132.
PROJECT MGMT	132.	-	60.
DATA	60.	-	2247.
SUBTOTAL (ENG)	2247.	-	
MANUFACTURING		-	-
PRODUCTION	-	-	200.
PROTOTYPE	200.	-	33.
TOOL-TEST EQ	33.	-	233.
SUBTOTAL (MFG)	233.	-	
TOTAL COST	2480.	-	2480.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.194*	5.553*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.256	6.853	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.864*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	61724*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (14)	NOV 92* (0)	NOV 92* (14)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:08
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

STRUCTURE, PROPULSION SUBMOD.

	UNIT WEIGHT	150.00	MODE	2
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	38.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	350.	-	350.
DESIGN	1106.	-	1106.
SYSTEMS	231.	-	231.
PROJECT MGMT	171.	-	171.
DATA	78.	-	78.
SUBTOTAL (ENG)	1936.	-	1936.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	535.	-	535.
TOOL-TEST EQ	68.	-	68.
SUBTOTAL (MFG)	603.	-	603.
TOTAL COST	2539.	-	2539.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	150.000	ENGINEERING COMPLEXITY	1.200
DENSITY	3.947*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.900	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	29143*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (0)	JAN 93* (16)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTALS

22-AUG-90 22:08
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	141.00	MODE	2
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	10.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING		-	87.
DRAFTING	87.	-	287.
DESIGN	287.	-	38.
SYSTEMS	38.	-	168.
PROJECT MGMT	168.	-	43.
DATA	43.	-	624.
SUBTOTAL (ENG)	624.	-	
MANUFACTURING		-	-
PRODUCTION	-	-	4084.
PROTOTYPE	4084.	-	574.
TOOL-TEST EQ	574.	-	4658.
SUBTOTAL (MFG)	4658.	-	
TOTAL COST	5282.	-	5282.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	141.000	ENGINEERING COMPLEXITY	1.000
DENSITY	14.100*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.669	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	PLATFORM	2.000
DESIGN REPEAT	0.800	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	14219*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (24)	SEP 93* (0)	SEP 93* (24)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

MECHANICAL ITEM

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22-AUG-90 22:08
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PROPULSION SUBMOD. I&T

	UNIT WEIGHT	17.78	MODE	2
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	1.19	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	132.	-	132.
DESIGN	409.	-	409.
SYSTEMS	63.	-	63.
PROJECT MGMT	45.	-	45.
DATA	20.	-	20.
SUBTOTAL (ENG)	668.	-	668.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	151.	-	151.
TOOL-TEST EQ	21.	-	21.
SUBTOTAL (MFG)	172.	-	172.
TOTAL COST	841.	-	841.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	17.784*	ENGINEERING COMPLEXITY	1.000
DENSITY	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	8.436	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	40944*

SCHEDULE	START		FIRST ITEM		FINISH
DEVELOPMENT	OCT 91	(15)	DEC 92*	(0)	DEC 92* (15)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL5 22-AUG-90 22:08 GLOBAL FILENAME:
(190172) ESCALATION FILENAME:

DAT

	UNIT WEIGHT	47.07	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	2.05	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	756.	-	756.
DESIGN	2427.	-	2427.
SYSTEMS	339.	-	339.
PROJECT MGMT	227.	-	227.
DATA	102.	-	102.
SUBTOTAL (ENG)	3850.	-	3850.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	483.	-	483.
TOOL-TEST EQ	77.	-	77.
SUBTOTAL (MFG)	560.	-	560.
TOTAL COST	4410.	-	4410.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.283*	30.791*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
DESIGN COMPLEXITY	9.546	7.938	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.227*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	46698*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (0)	JAN 93* (16)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL5

22-AUG-90 22:08
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

P JAD ADAPTER

	UNIT WEIGHT	1000.00	MODE	1
PROTOTYPE QUANTITY	1.000 UNIT VOLUME	249.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	443.	-	443.
DESIGN	1243.	-	1243.
SYSTEMS	87.	-	87.
PROJECT MGMT	236.	-	236.
DATA	88.	-	88.
SUBTOTAL (ENG)	2097.	-	2097.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2268.	-	2268.
TOOL-TEST EQ	254.	-	254.
SUBTOTAL (MFG)	2522.	-	2522.
 TOTAL COST	 4619.	 -	 4619.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	995.000	ENGINEERING COMPLEXITY	0.600
DENSITY	42.000	3.996*	PROTOTYPE SUPPORT	1.0
3. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.200	ELECT VOL FRACTION	0.000*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.134	0.263	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(15)	DEC 92*	(0)	DEC 92*	(15)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
INTEGRATION AND TEST

INPUT FILENAME: TOTAL5

22-AUG-90 22:08
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

L SYSTEM I&T

	INT WEIGHT	82.197* MODE	5
PROTOTYPE QUANTITY	1.000 INT VOLUME	4.184* QUANTITY/HNA	0

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	955.	-	955.
DESIGN	3090.	-	3090.
SYSTEMS	424.	-	424.
PROJECT MGMT	286.	-	286.
DATA	128.	-	128.
SUBTOTAL (ENG)	4882.	-	4882.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	682.	-	682.
TOOL-TEST EQ	109.	-	109.
SUBTOTAL (MFG)	790.	-	790.
TOTAL COST	5673.	-	5673.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	19.430*	62.767*	ENGINEERING COMPLEXITY	1.000*
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.734*	7.658*	PROTO SCHEDULE FACTOR	0.250*
NEW PLANS LEVEL	0.500	0.500	ELECT VOL FRACTION	0.133
INTEGRATION LEVEL	0.000	0.000	PLATFORM	2.000
			YEAR OF TECHNOLOGY	1991*
			RELIABILITY FACTOR	1.0
			MTBF (FIELD)	41531*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (0)	FEB 93* (17)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
AMORTIZED UNIT COST	0.00*
DEV COST MULTIPLIER	1.00*
PROD COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
PRODUCTION TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
SYSTEM COST SUMMARY

INPUT FILENAME: TOTAL5

22-AUG-90 22:09
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TOTAL COST, WITH INTEGRATION COST

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	14504.	-	14504.
DESIGN	46181.	-	46181.
SYSTEMS	6489.	-	6489.
PROJ MGMT	5246.	-	5246.
DATA	2224.	-	2224.
SUBTOTAL (ENG)	74644.	-	74644.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	27121.	-	27121.
TOOL-TEST EQ	3856.	-	3856.
PURCH ITEMS	0.	-	0.
SUBTOTAL (MFG)	30976.	-	30976.
TOTAL COST	105621.	-	105621.

Restart the Program (Y/N)? R

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Run 6: Same as run 4, but adds spares

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL6 23-AUG-90 10:58 GLOBAL FILENAME:
 (190172) ESCALATION FILENAME:

STRCU MM

	UNIT WEIGHT	309.00	MODE	2
PROTOTYPE QUANTITY	4.600 UNIT VOLUME	172.00	QUANTITY/NHA	1
PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST	
ENGINEERING				
DRAFTING	686.	-	686.	
DESIGN	2400.	-	2400.	
SYSTEMS	429.	-	429.	
PROJECT MGMT	610.	-	610.	
DATA	194.	-	194.	
SUBTOTAL(ENG)	4317.	-	4317.	
MANUFACTURING				
PRODUCTION	-	-	-	
PROTOTYPE	3772.	-	3772.	
TOOL-TEST EQ	340.	-	340.	
SUBTOTAL(MFG)	4111.	-	4111.	
TOTAL COST	8429.	-	8429.	

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	309.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.797*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	23462*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93* (7)	OCT 93* (25)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 10:58
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

POWER MM

	UNIT WEIGHT	100.00	MODE	1
PROTOTYPE QUANTITY	6.200	UNIT VOLUME	1.50	QUANTITY/NHA 1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	8.	-	8.
DESIGN	30.	-	30.
SYSTEMS	3.	-	3.
PROJECT MGMT	296.	-	296.
DATA	54.	-	54.
SUBTOTAL (ENG)	392.	-	392.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	5864.	-	5864.
TOOL-TEST EQ	741.	-	741.
SUBTOTAL (MFG)	6605.	-	6605.
TOTAL COST	6997.	-	6997.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
TIGHT	32.000*	68.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	45.333*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.810	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.050	0.050	ELECT VOL FRACTION	0.435*
DESIGN REPEAT	0.950	0.950	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	27948*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(12)	SEP 92*	(5)	FEB 93*	(17)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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	UNIT WEIGHT	35.00	MODE	1
PROTOTYPE QUANTITY	5.000 UNIT VOLUME	2.00	QUANTITY/NHA	1

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
EIGHT	5.000*	30.000	ENGINEERING COMPLEXITY	0.900
DENSITY	49.000	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.051*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE DEVELOPMENT	START OCT 91 (15)	FIRST ITEM DEC 92* (5)	FINISH MAY 93* (20)
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SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 10:58
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

THERMAL MM

	UNIT WEIGHT	45.00	MODE	1
PROTOTYPE QUANTITY	5.600	UNIT VOLUME	1.50	QUANTITY/NHA 1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	898.	-	898.
DESIGN	3249.	-	3249.
SYSTEMS	374.	-	374.
PROJECT MGMT	359.	-	359.
DATA	125.	-	125.
SUBTOTAL (ENG)	5005.	-	5005.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1152.	-	1152.
TOOL-TEST EQ	146.	-	146.
SUBTOTAL (MFG)	1298.	-	1298.
TOTAL COST	6303.	-	6303.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WIGHT	6.000*	39.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	26.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.800	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.950	ELECT VOL FRACTION	0.091*
DESIGN REPEAT	0.000	0.300	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	133907*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(16)	JAN 93*	(6)	JUL 93*	(22)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

MECHANICAL ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 10:58
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PC MM

	UNIT WEIGHT	421.00	MODE	2
PROTOTYPE QUANTITY	4.900 UNIT VOLUME	11.70	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1782.	-	1782.
DESIGN	5921.	-	5921.
SYSTEMS	837.	-	837.
PROJECT MGMT	936.	-	936.
DATA	313.	-	313.
SUBTOTAL (ENG)	9789.	-	9789.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	4795.	-	4795.
TOOL-TEST EQ	405.	-	405.
SUBTOTAL (MFG)	5201.	-	5201.
TOTAL COST	14989.	-	14989.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	421.000	ENGINEERING COMPLEXITY	1.000
DENSITY	35.983*	PROTOTYPE SUPPORT	1.0
FG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	21383*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93* (7)	OCT 93* (25)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 10:59
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

MM

	UNIT WEIGHT	20.00	MODE	1
PROTOTYPE QUANTITY	7.700 UNIT VOLUME	3.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	25.	-	25.
DESIGN	67.	-	67.
SYSTEMS	2.	-	2.
PROJECT MGMT	224.	-	224.
DATA	43.	-	43.
SUBTOTAL (ENG)	360.	-	360.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	4026.	-	4026.
TOOL-TEST EQ	283.	-	283.
SUBTOTAL (MFG)	4309.	-	4309.
 TOTAL COST	 4669.	 -	 4669.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.000*	4.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	1.333*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.119*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	65805*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92* (6)	MAR 93* (18)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	191*	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 10:59
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

ELCSS MM

PROTOTYPE QUANTITY	UNIT WEIGHT 5.100	UNIT VOLUME 127.00	MODE 6.00	QUANTITY/NHA	2 1
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PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	204.	-	204.
DESIGN	643.	-	643.
SYSTEMS	84.	-	84.
PROJECT MGMT	148.	-	148.
DATA	45.	-	45.
SUBTOTAL(ENG)	1124.	-	1124.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1071.	-	1071.
TOOL-TEST EQ	81.	-	81.
SUBTOTAL(MFG)	1153.	-	1153.
TOTAL COST	2276.	-	2276.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS
WIGHT	127.000	ENGINEERING COMPLEXITY 0.900
DENSITY	21.167*	PROTOTYPE SUPPORT 1.0
MFG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR 0.250*
NEW DESIGN	0.900	PLATFORM 2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY 1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR 1.0
		MTBF(FIELD) 37694*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (13)	OCT 92* (5)	MAR 93* (18)

SUPPLEMENTAL INFORMATION	TOOLING & PROCESS FACTORS
ECONOMIC BASE 192	DEVELOPMENT TOOLING 1.00*
ESCALATION 0.00	
DEV COST MULTIPLIER 1.00*	

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL6	23-AUG-90 10:59 (190172)	GLOBAL FILENAME: ESCALATION FILENAME:
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LESS PM I&T

	UNIT WEIGHT	47.30	MODE	1
PROTOTYPE QUANTITY	5.000	UNIT VOLUME	2.75	QUANTITY/NHA 1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	512.	-	512.
DESIGN	1836.	-	1836.
SYSTEMS	215.	-	215.
PROJECT MGMT	223.	-	223.
DATA	75.	-	75.
SUBTOTAL (ENG)	2861.	-	2861.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1050.	-	1050.
TOOL-TEST EQ	131.	-	131.
SUBTOTAL (MFG)	1182.	-	1182.
TOTAL COST	4042.	-	4042.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	6.034*	41.264*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.708	7.297	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.063*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	129634*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (14)	NOV 92* (6)	MAY 93* (20)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 10:59
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

1 EXP MOD MM

PROTOTYPE QUANTITY

UNIT WEIGHT
5.300 UNIT VOLUME

132.00 MODE
14.00 QUANTITY/NHA

1
1

	DEVELOPMENT	PRODUCTION	TOTAL COST
PROGRAM COST (\$ 1000)			
ENGINEERING	245.	-	245.
DRAFTING	912.	-	912.
DESIGN	97.	-	97.
SYSTEMS	690.	-	690.
PROJECT MGMT	141.	-	141.
DATA	2086.	-	2086.
SUBTOTAL (ENG)			
MANUFACTURING	-	-	-
PRODUCTION	12997.	-	12997.
PROTOTYPE	1809.	-	1809.
TOOL-TEST EQ	14807.	-	14807.
SUBTOTAL (MFG)			
TOTAL COST	16892.	-	16892.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WIGHT	54.000*	78.000	ENGINEERING COMPLEXITY	1.000
ENSITY	44.000	5.571*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.750	ELECT VOL FRACTION	0.088*
DESIGN REPEAT	0.900	0.900	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	19978*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (22)	JUL 93* (8)	MAR 94* (30)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 10:59
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

MOD MM

	UNIT WEIGHT	268.00	MODE	1
PROTOTYPE QUANTITY	5.300 UNIT VOLUME	12.30	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	3276.	-	3276.
DESIGN	12209.	-	12209.
SYSTEMS	1304.	-	1304.
PROJECT MGMT	1738.	-	1738.
DATA	520.	-	520.
SUBTOTAL (ENG)	19048.	-	19048.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	14742.	-	14742.
TOOL-TEST EQ	2058.	-	2058.
SUBTOTAL (MFG)	16800.	-	16800.
TOTAL COST	35849.	-	35849.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	214.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	17.398*	PROTOTYPE SUPPORT	1.0
CFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.600	0.900	ELECT VOL FRACTION	0.100*
DESIGN REPEAT	0.200	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	19978*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (24)	SEP 93* (9)	JUN 94* (33)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

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	UNIT WEIGHT	105.00	MODE	2
PROTOTYPE QUANTITY	5.300 UNIT VOLUME	28.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	675.	-	675.
DESIGN	2250.	-	2250.
SYSTEMS	316.	-	316.
PROJECT MGMT	340.	-	340.
DATA	116.	-	116.
SUBTOTAL (ENG)	3697.	-	3697.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1515.	-	1515.
TOOL-TEST EQ	126.	-	126.
SUBTOTAL (MFG)	1641.	-	1641.
TOTAL COST	5338.	-	5338.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	105.000	ENGINEERING COMPLEXITY	1.000
ENSITY	3.750*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	32434*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (6)	JUL 93* (22)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

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	UNIT WEIGHT	34.57	MODE	1
PROTOTYPE QUANTITY	4.300 UNIT VOLUME	1.53	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	758.	-	758.
DESIGN	2738.	-	2738.
SYSTEMS	314.	-	314.
PROJECT MGMT	321.	-	321.
DATA	109.	-	109.
SUBTOTAL (ENG)	4240.	-	4240.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1589.	-	1589.
TOOL-TEST EQ	209.	-	209.
SUBTOTAL (MFG)	1798.	-	1798.
TOTAL COST	6038.	-	6038.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.620*	22.951*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.071	7.363	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.217*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	75715*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (7)	SEP 93* (24)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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	UNIT WEIGHT	45.61	MODE	1
PROTOTYPE QUANTITY	5.000 UNIT VOLUME	2.27	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	762.	-	762.
DESIGN	2757.	-	2757.
SYSTEMS	316.	-	316.
PROJECT MGMT	337.	-	337.
DATA	112.	-	112.
SUBTOTAL(ENG)	4285.	-	4285.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1747.	-	1747.
TOOL-TEST EQ	222.	-	222.
SUBTOTAL(MFG)	1969.	-	1969.
TOTAL COST	6254.	-	6254.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.574*	34.033*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.929	7.395	PROTO SCHEDULE FACTOR	0.250*
EW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.146*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	73009*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (6)	AUG 93* (23)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 11:00
(190172)

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	UNIT WEIGHT	50.00	MODE	2
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	39.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	186.	-	186.
DESIGN	636.	-	636.
SYSTEMS	118.	-	118.
PROJECT MGMT	123.	-	123.
DATA	45.	-	45.
SUBTOTAL (ENG)	1108.	-	1108.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	522.	-	522.
TOOL-TEST EQ	51.	-	51.
SUBTOTAL (MFG)	573.	-	573.
 TOTAL COST	 1682.	 -	 1682.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	50.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.282*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	40520*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (3)	MAR 93* (18)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

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23-AUG-90 11:00
(190172)

GLOBAL FILENAME:
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FULLR DM

	UNIT WEIGHT	210.00	MODE	1
PROTOTYPE QUANTITY	3.600 UNIT VOLUME	3.00	QUANTITY/NHA	2

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	813.	-	813.
DESIGN	2908.	-	2908.
SYSTEMS	338.	-	338.
PROJECT MGMT	517.	-	517.
DATA	151.	-	151.
SUBTOTAL (ENG)	4728.	-	4728.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	5567.	-	5567.
TOOL-TEST EQ	733.	-	733.
SUBTOTAL (MFG)	6301.	-	6301.
TOTAL COST	11028.	-	11028.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	40.000*	170.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	56.667*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.954	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.200	ELECT VOL FRACTION	0.272*
DESIGN REPEAT	0.500	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	22458*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (20)	MAY 93* (7)	DEC 93* (27)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

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23-AUG-90 11:00
(190172)

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	UNIT WEIGHT	50.00	MODE	1
PROTOTYPE QUANTITY	3.200 UNIT VOLUME	4.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	303.	-	303.
DESIGN	1043.	-	1043.
SYSTEMS	107.	-	107.
PROJECT MGMT	131.	-	131.
DATA	45.	-	45.
SUBTOTAL (ENG)	1630.	-	1630.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	678.	-	678.
TOOL-TEST EQ	90.	-	90.
SUBTOTAL (MFG)	768.	-	768.
TOTAL COST	2399.	-	2399.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	45.000	ENGINEERING COMPLEXITY	0.900
DENSITY	49.000	11.250*	PROTOTYPE SUPPORT	1.0
DESIGN COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.026*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(15)	DEC 92*	(4)	APR 93*	(19)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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MAL DM

		UNIT WEIGHT	10.00	MODE	2
PROTOTYPE QUANTITY	2.100	UNIT VOLUME	0.20	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	95.	-	95.
DESIGN	293.	-	293.
SYSTEMS	47.	-	47.
PROJECT MGMT	37.	-	37.
DATA	15.	-	15.
SUBTOTAL (ENG)	486.	-	486.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	56.	-	56.
TOOL-TEST EQ	7.	-	7.
SUBTOTAL (MFG)	63.	-	63.
TOTAL COST	550.	-	550.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS
WEIGHT	10.000	ENGINEERING COMPLEXITY 1.000
DENSITY	50.000*	PROTOTYPE SUPPORT 1.0
MFG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR 0.250*
NEW DESIGN	0.950	PLATFORM 2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY 1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR 1.0
		MTBF (FIELD) 80800*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (11)	AUG 92* (2)	OCT 92* (13)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

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TMD DM

	UNIT WEIGHT	39.00	MODE	1
PROTOTYPE QUANTITY	6.900 UNIT VOLUME	2.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	35.	-	35.
DESIGN	92.	-	92.
SYSTEMS	2.	-	2.
PROJECT MGMT	296.	-	296.
DATA	57.	-	57.
SUBTOTAL (ENG)	481.	-	481.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	5370.	-	5370.
TOOL-TEST EQ	379.	-	379.
SUBTOTAL (MFG)	5749.	-	5749.
TOTAL COST	6231.	-	6231.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	22.000*	17.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	8.500*	PROTOTYPE SUPPORT	1.0
WG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.244*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	48164*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(13)	OCT 92*	(6)	APR 93*	(19)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

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23-AUG-90 11:01
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GLOBAL FILENAME:
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	UNIT WEIGHT	150.00	MODE	1
PROTOTYPE QUANTITY	5.000 UNIT VOLUME	6.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	12.	-	12.
DESIGN	28.	-	28.
SYSTEMS	0.	-	0.
PROJECT MGMT	79.	-	79.
DATA	17.	-	17.
SUBTOTAL (ENG)	136.	-	136.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1249.	-	1249.
TOOL-TEST EQ	63.	-	63.
SUBTOTAL (MFG)	1312.	-	1312.
TOTAL COST	1448.	-	1448.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	145.000	ENGINEERING COMPLEXITY	0.200
DENSITY	42.000	24.167*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.050	0.200	ELECT VOL FRACTION	0.020*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	161130*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (8)	MAY 92* (3)	AUG 92* (11)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

PRICE HARDWARE MODEL
ELECTRONIC ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 11:01
(190172)

GLOBAL FILENAME:
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	UNIT WEIGHT	50.00	MODE	1
PROTOTYPE QUANTITY	13.000 UNIT VOLUME	3.00	QUANTITY/NHA	3

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	165.	-	165.
DESIGN	532.	-	532.
SYSTEMS	30.	-	30.
PROJECT MGMT	189.	-	189.
DATA	46.	-	46.
SUBTOTAL(ENG)	960.	-	960.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2035.	-	2035.
TOOL-TEST EQ	189.	-	189.
SUBTOTAL(MFG)	2224.	-	2224.
TOTAL COST	3184.	-	3184.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	2.000*	48.000	ENGINEERING COMPLEXITY	0.600
DENSITY	49.000	16.000*	PROTOTYPE SUPPORT	1.0
ENG. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.800	0.200	ELECT VOL FRACTION	0.014*
DESIGN REPEAT	0.200	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.151	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	423050*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(12)	SEP 92*	(7)	APR 93*	(19)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 11:01
(190172)GLOBAL FILENAME:
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M SS GNC I&T

	UNIT WEIGHT	48.43	MODE	1
PROTOTYPE QUANTITY	5.000 UNIT VOLUME	2.28	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING		-	810.
DRAFTING	810.	-	2910.
DESIGN	2910.	-	339.
SYSTEMS	339.	-	358.
PROJECT MGMT	358.	-	120.
DATA	120.	-	4538.
SUBTOTAL (ENG)	4538.	-	
MANUFACTURING		-	-
PRODUCTION	-	-	1784.
PROTOTYPE	1784.	-	220.
TOOL-TEST EQ	220.	-	2004.
SUBTOTAL (MFG)	2004.	-	
TOTAL COST	6541.	-	6541.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	14.221*	34.208*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.743	7.422	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.178*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	56537*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (6)	AUG 93* (23)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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23-AUG-90 11:02
(190172)

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G CONTROL DM

PROTOTYPE QUANTITY	UNIT WEIGHT	98.00	MODE	1
	7.800 UNIT VOLUME	5.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	74.	-	74.
DESIGN	243.	-	243.
SYSTEMS	17.	-	17.
PROJECT MGMT	280.	-	280.
DATA	56.	-	56.
SUBTOTAL(ENG)	670.	-	670.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	4650.	-	4650.
TOOL-TEST EQ	457.	-	457.
SUBTOTAL(MFG)	5107.	-	5107.
TOTAL COST	5777.	-	5777.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	30.000*	68.000	ENGINEERING COMPLEXITY	0.700
DENSITY	44.000	13.600*	PROTOTYPE SUPPORT	1.0
WG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
W DESIGN	0.200	0.150	ELECT VOL FRACTION	0.136*
DESIGN REPEAT	0.800	0.850	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.120	0.097	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	27834*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (7)	AUG 93* (23)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

ELECTRONIC ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 11:02
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	10.00	MODE	1
PROTOTYPE QUANTITY	15.000	UNIT VOLUME	0.50	QUANTITY/NHA 4

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	134.	-	134.
DESIGN	451.	-	451.
SYSTEMS	31.	-	31.
PROJECT MGMT	178.	-	178.
DATA	41.	-	41.
SUBTOTAL (ENG)	835.	-	835.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2133.	-	2133.
TOOL-TEST EQ	204.	-	204.
SUBTOTAL (MFG)	2337.	-	2337.
TOTAL COST	3173.	-	3173.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	8.000*	2.000	ENGINEERING COMPLEXITY	0.700
DENSITY	40.000	4.000*	PROTOTYPE SUPPORT	1.0
3. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.950	ELECT VOL FRACTION	0.400*
DESIGN REPEAT	0.600	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	101657*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(14)	NOV 92*	(8)	JUL 93*	(22)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

INPUT FILENAME: TOTAL6

23-AUG-90 11:02
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

GNC ANTENNA DM

UNIT WEIGHT	1.00	MODE	1
24.000 UNIT VOLUME	0.05	QUANTITY/NHA	7

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	4.	-	4.
DESIGN	11.	-	11.
SYSTEMS	0.	-	0.
PROJECT MGMT	18.	-	18.
DATA	4.	-	4.
SUBTOTAL (ENG)	37.	-	37.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	245.	-	245.
TOOL-TEST EQ	15.	-	15.
SUBTOTAL (MFG)	259.	-	259.
TOTAL COST	297.	-	297.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS
WEIGHT	0.500*	0.500	ENGINEERING COMPLEXITY 0.300
DENSITY	40.000	10.000*	PROTOTYPE SUPPORT 1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR 0.250*
NEW DESIGN	0.300	0.300	ELECT VOL FRACTION 0.250*
DESIGN REPEAT	0.700	0.700	PLATFORM 2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY 1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR 1.0
			MTBF (FIELD) 1538786*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (6)	MAR 92* (4)	JUL 92* (10)

SUPPLEMENTAL INFORMATION	TOOLING & PROCESS FACTORS
ECONOMIC BASE 192	DEVELOPMENT TOOLING 1.00*
ESCALATION 0.00	
DEV COST MULTIPLIER 1.00*	

PRICE HARDWARE MODEL
ELECTRONIC ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 11:02
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

GM *T

	UNIT WEIGHT	16.75	MODE	1
PROTOTYPE QUANTITY	6.000 UNIT VOLUME	0.37	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	503.	-	503.
DESIGN	1793.	-	1793.
SYSTEMS	215.	-	215.
PROJECT MGMT	223.	-	223.
DATA	75.	-	75.
SUBTOTAL (ENG)	2809.	-	2809.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	926.	-	926.
TOOL-TEST EQ	106.	-	106.
SUBTOTAL (MFG)	1031.	-	1031.
TOTAL COST	3841.	-	3841.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.194*	5.553*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
3. COMPLEXITY	9.256	6.853	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.864*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	61724*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (14)	NOV 92* (6)	MAY 93* (20)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

MECHANICAL ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 11:02
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

STRUCTURE, PROPULSION SUBMOD.

	UNIT WEIGHT	150.00	MODE	2
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	38.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	381.	-	381.
DESIGN	1304.	-	1304.
SYSTEMS	241.	-	241.
PROJECT MGMT	273.	-	273.
DATA	97.	-	97.
SUBTOTAL (ENG)	2296.	-	2296.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1373.	-	1373.
TOOL-TEST EQ	135.	-	135.
SUBTOTAL (MFG)	1508.	-	1508.
TOTAL COST	3804.	-	3804.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	150.000	ENGINEERING COMPLEXITY	1.200
DENSITY	3.947*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.900	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	29143*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(16)	JAN 93*	(5)	JUN 93*	(21)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 11:02
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

F ULSION DM

	UNIT WEIGHT	141.00	MODE	2
PROTOTYPE QUANTITY	2.300 UNIT VOLUME	10.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	93.	-	93.
DESIGN	327.	-	327.
SYSTEMS	39.	-	39.
PROJECT MGMT	377.	-	377.
DATA	81.	-	81.
SUBTOTAL (ENG)	917.	-	917.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	8190.	-	8190.
TOOL-TEST EQ	1062.	-	1062.
SUBTOTAL (MFG)	9252.	-	9252.
 TOTAL COST	 10169.	 -	 10169.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	141.000	ENGINEERING COMPLEXITY	1.000
DENSITY	14.100*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.669	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	PLATFORM	2.000
DESIGN REPEAT	0.800	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	14219*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (24)	SEP 93* (5)	FEB 94* (29)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

MECHANICAL ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 11:03
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

COMPULSION SUBMOD. I&T

	UNIT WEIGHT	17.78	MODE	2
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	1.19	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	144.	-	144.
DESIGN	483.	-	483.
SYSTEMS	65.	-	65.
PROJECT MGMT	68.	-	68.
DATA	24.	-	24.
SUBTOTAL (ENG)	784.	-	784.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	386.	-	386.
TOOL-TEST EQ	41.	-	41.
SUBTOTAL (MFG)	427.	-	427.
TOTAL COST	1210.	-	1210.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	17.784*	ENGINEERING COMPLEXITY	1.000
DENSITY	15.000*	PROTOTYPE SUPPORT	1.0
IFG. COMPLEXITY	8.436	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	40944*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (4)	APR 93* (19)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

GLOBAL FILENAME:
ESCALATION FILENAME:

PROTOTYPE QUANTITY

UNIT WEIGHT	47.07	MODE	1
5.000 UNIT VOLUME	2.05	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	849.	-	849.
DESIGN	3030.	-	3030.
SYSTEMS	360.	-	360.
PROJECT MGMT	381.	-	381.
DATA	127.	-	127.
SUBTOTAL (ENG)	4748.	-	4748.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1899.	-	1899.
TOOL-TEST EQ	226.	-	226.
SUBTOTAL (MFG)	2125.	-	2125.
TOTAL COST	6874.	-	6874.

DESIGN FACTORS		ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.283*	30.791*	ENGINEERING COMPLEXITY	1.000	
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0	
ENG. COMPLEXITY	9.546	7.938	PROTO SCHEDULE FACTOR	0.250*	
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.227*	
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000	
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*	
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0	
			MTBF (FIELD)	46698*	

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (6)	JUL 93* (22)

SUPPLEMENTAL INFORMATION			
ECONOMIC BASE	192	TOOLING & PROCESS FACTORS	
ESCALATION	0.00	DEVELOPMENT TOOLING	1.00*
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL6

23-AUG-90 11:03
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

P JAD ADAPTER

	UNIT WEIGHT	1000.00	MODE	1
PROTOTYPE QUANTITY	7.800	UNIT VOLUME	249.00	QUANTITY/NHA 1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	510.	-	510.
DESIGN	1619.	-	1619.
SYSTEMS	94.	-	94.
PROJECT MGMT	954.	-	954.
DATA	211.	-	211.
SUBTOTAL(ENG)	3387.	-	3387.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	13497.	-	13497.
TOOL-TEST EQ	1241.	-	1241.
SUBTOTAL(MFG)	14738.	-	14738.
 TOTAL COST	 18125.	 -	 18125.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	995.000	ENGINEERING COMPLEXITY	0.600
VISITY	42.000	3.996*	PROTOTYPE SUPPORT	1.0
WG. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.200	ELECT VOL FRACTION	0.000*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.134	0.263	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (8)	AUG 93* (23)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

INTEGRATION AND TEST

INPUT FILENAME: TOTAL6

23-AUG-90 11:03
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

SYSTEM I&T

PROTOTYPE QUANTITY

INT WEIGHT
5.000 INT VOLUME

82.197* MODE
4.184* QUANTITY/HNA

5
0

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING		-	1074.
DRAFTING	1074.	-	3857.
DESIGN	3857.	-	450.
SYSTEMS	450.	-	491.
PROJECT MGMT	491.	-	162.
DATA	162.	-	6033.
SUBTOTAL (ENG)	6033.	-	
MANUFACTURING		-	-
PRODUCTION	-	-	2673.
PROTOTYPE	2673.	-	327.
TOOL-TEST EQ	327.	-	3000.
SUBTOTAL (MFG)	3000.	-	
TOTAL COST	9033.	-	9033.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	19.430*	62.767*	ENGINEERING COMPLEXITY	1.000*
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.734*	7.658*	PROTO SCHEDULE FACTOR	0.250*
NEW PLANS LEVEL	0.500	0.500	ELECT VOL FRACTION	0.133
INTEGRATION LEVEL	0.000	0.000	PLATFORM	2.000
			YEAR OF TECHNOLOGY	1991*
			RELIABILITY FACTOR	1.0
			MTBF (FIELD)	41531*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (7)	SEP 93* (24)

SUPPLEMENTAL INFORMATION	
ECONOMIC BASE	192
ESCALATION	0.00
AMORTIZED UNIT COST	0.00*
DEV COST MULTIPLIER	1.00*
PROD COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*
PRODUCTION TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
SYSTEM COST SUMMARY

INPUT FILENAME: TOTAL6

23-AUG-90 11:03
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TOTAL COST, WITH INTEGRATION COST

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	16290.	-	16290.
DESIGN	57537.	-	57537.
SYSTEMS	6883.	-	6883.
PROJ MGMT	11334.	-	11334.
DATA	3263.	-	3263.
SUBTOTAL (ENG)	95308.	-	95308.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	108457.	-	108457.
TOOL-TEST EQ	12212.	-	12212.
PURCH ITEMS	0.	-	0.
SUBTOTAL (MFG)	120669.	-	120669.
TOTAL COST	215977.	-	215977.

Restart the Program (Y/N)? N Y

PRICE H Model
(190172)

- 1 Specify Custom Global Data File
 - 2 Specify Custom Escalation Rate File
 - 3 Generate Output File
 - 4 Generate Lifecycle Data File
 - 5 Generate Postprocessor File
 - 6 Turn On COMMAND Prompts
 - 7 Display Schedule Penalty Report
 - 8 Select Output Report Format
- H Help
Q Exit Model
R Enter Data and Begin Processing

Enter selection : R

Enter Input Data Filename: TOTAL7
Enter Input Data Filename:

Run 7: Same as Run 6, but adds 2 more flight units

MECHANICAL ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:43
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

STOCK MM

	UNIT WEIGHT	309.00	MODE	2
PROTOTYPE QUANTITY	6.600 UNIT VOLUME	172.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	699.	-	699.
DESIGN	2487.	-	2487.
SYSTEMS	433.	-	433.
PROJECT MGMT	746.	-	746.
DATA	218.	-	218.
SUBTOTAL(ENG)	4584.	-	4584.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	5190.	-	5190.
TOOL-TEST EQ	453.	-	453.
SUBTOTAL(MFG)	5643.	-	5643.
TOTAL COST	10227.	-	10227.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	309.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.797*	PROTOTYPE SUPPORT	1.0
WG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	23462*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(18)	MAR 93*	(8)	NOV 93*	(26)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:43
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

POWER MM

PROTOTYPE QUANTITY	UNIT WEIGHT	100.00	MODE	1
	8.200 UNIT VOLUME	1.50	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	8.	-	8.
DESIGN	31.	-	31.
SYSTEMS	3.	-	3.
PROJECT MGMT	390.	-	390.
DATA	70.	-	70.
SUBTOTAL (ENG)	502.	-	502.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	7492.	-	7492.
TOOL-TEST EQ	931.	-	931.
SUBTOTAL (MFG)	8423.	-	8423.
TOTAL COST	8925.	-	8925.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	32.000*	68.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	45.333*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.810	PROTO SCHEDULE FACTOR	0.250*
HW DESIGN	0.050	0.050	ELECT VOL FRACTION	0.435*
DESIGN REPEAT	0.950	0.950	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	27948*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92* (6)	MAR 93* (18)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:43
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

HARNESS MM

	UNIT WEIGHT	35.00	MODE	1
PROTOTYPE QUANTITY	7.000 UNIT VOLUME	2.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	280.	-	280.
DESIGN	999.	-	999.
SYSTEMS	97.	-	97.
PROJECT MGMT	161.	-	161.
DATA	48.	-	48.
SUBTOTAL (ENG)	1584.	-	1584.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1211.	-	1211.
TOOL-TEST EQ	147.	-	147.
SUBTOTAL (MFG)	1359.	-	1359.
TOTAL COST	2943.	-	2943.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	30.000	ENGINEERING COMPLEXITY	0.900
DENSITY	49.000	15.000*	PROTOTYPE SUPPORT	1.0
3. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.051*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (6)	JUN 93* (21)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:43
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

T MAL MM

	UNIT WEIGHT	45.00	MODE	1
PROTOTYPE QUANTITY	7.600 UNIT VOLUME	1.50	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	913.	-	913.
DESIGN	3343.	-	3343.
SYSTEMS	377.	-	377.
PROJECT MGMT	391.	-	391.
DATA	130.	-	130.
SUBTOTAL (ENG)	5154.	-	5154.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1505.	-	1505.
TOOL-TEST EQ	185.	-	185.
SUBTOTAL (MFG)	1690.	-	1690.
TOTAL COST	6845.	-	6845.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	6.000*	39.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	26.000*	PROTOTYPE SUPPORT	1.0
DESIGN COMPLEXITY	9.800	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.950	ELECT VOL FRACTION	0.091*
DESIGN REPEAT	0.000	0.300	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	133907*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(16)	JAN 93*	(8)	SEP 93*	(24)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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23-AUG-90 11:43
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1M

	UNIT WEIGHT	421.00	MODE	2
PROTOTYPE QUANTITY	6.900 UNIT VOLUME	11.70	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING		-	1815.
DRAFTING	1815.	-	6121.
DESIGN	6121.	-	845.
SYSTEMS	845.	-	1079.
PROJECT MGMT	1079.	-	337.
DATA	337.	-	10197.
SUBTOTAL (ENG)	10197.	-	
MANUFACTURING		-	-
PRODUCTION	-	-	6492.
PROTOTYPE	6492.	-	528.
TOOL-TEST EQ	528.	-	7020.
SUBTOTAL (MFG)	7020.	-	
TOTAL COST	17218.	-	17218.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	421.000	ENGINEERING COMPLEXITY	1.000
DENSITY	35.983*	PROTOTYPE SUPPORT	1.0
IFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	21383*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93* (9)	DEC 93* (27)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:43
(190172)GLOBAL FILENAME:
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	UNIT WEIGHT	20.00	MODE	1
PROTOTYPE QUANTITY	11.700 UNIT VOLUME	3.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING	26.	-	26.
DRAFTING	69.	-	69.
DESIGN	2.	-	2.
SYSTEMS	331.	-	331.
PROJECT MGMT	61.	-	61.
DATA	488.	-	488.
SUBTOTAL (ENG)			
MANUFACTURING	-	-	-
PRODUCTION	5816.	-	5816.
PROTOTYPE	405.	-	405.
TOOL-TEST EQ	6221.	-	6221.
SUBTOTAL (MFG)			
TOTAL COST	6709.	-	6709.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.000*	4.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	1.333*	PROTOTYPE SUPPORT	1.0
ENG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.119*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	65805*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92* (7)	APR 93* (19)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	191*	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:44
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	127.00	MODE	2
PROTOTYPE QUANTITY	7.100 UNIT VOLUME	6.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	207.	-	207.
DESIGN	664.	-	664.
SYSTEMS	85.	-	85.
PROJECT MGMT	177.	-	177.
DATA	50.	-	50.
SUBTOTAL (ENG)	1183.	-	1183.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1438.	-	1438.
TOOL-TEST EQ	104.	-	104.
SUBTOTAL (MFG)	1541.	-	1541.
TOTAL COST	2725.	-	2725.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	127.000	ENGINEERING COMPLEXITY	0.900
DENSITY	21.167*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.900	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	37694*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(13)	OCT 92*	(6)	APR 93*	(19)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:44
(190172)

GLOBAL FILENAME:
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M' ESS PM I&T

	UNIT WEIGHT	47.30	MODE	1
PROTOTYPE QUANTITY	7.000 UNIT VOLUME	2.75	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	521.	-	521.
DESIGN	1896.	-	1896.
SYSTEMS	217.	-	217.
PROJECT MGMT	252.	-	252.
DATA	80.	-	80.
SUBTOTAL(ENG)	2966.	-	2966.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1409.	-	1409.
TOOL-TEST EQ	170.	-	170.
SUBTOTAL(MFG)	1580.	-	1580.
TOTAL COST	4546.	-	4546.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	6.034*	41.264*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.708	7.297	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.063*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	129634*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (14)	NOV 92* (7)	JUN 93* (21)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:44
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PR (P MOD MM

	UNIT WEIGHT	132.00	MODE	1
PROTOTYPE QUANTITY	7.300	UNIT VOLUME	14.00	QUANTITY/NHA 1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	249.	-	249.
DESIGN	940.	-	940.
SYSTEMS	98.	-	98.
PROJECT MGMT	922.	-	922.
DATA	180.	-	180.
SUBTOTAL(ENG)	2390.	-	2390.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	17170.	-	17170.
TOOL-TEST EQ	2358.	-	2358.
SUBTOTAL(MFG)	19528.	-	19528.
TOTAL COST	21917.	-	21917.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	78.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	5.571*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.750	ELECT VOL FRACTION	0.088*
DESIGN REPEAT	0.900	0.900	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	19978*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(22)	JUL 93*	(10)	MAY 94*	(32)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:44
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

3P 10D MM

	UNIT WEIGHT	268.00	MODE	1
PROTOTYPE QUANTITY	7.300 UNIT VOLUME	12.30	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	3333.	-	3333.
DESIGN	12585.	-	12585.
SYSTEMS	1316.	-	1316.
PROJECT MGMT	2042.	-	2042.
DATA	570.	-	570.
SUBTOTAL(ENG)	19846.	-	19846.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	19474.	-	19474.
TOOL-TEST EQ	2681.	-	2681.
SUBTOTAL(MFG)	22155.	-	22155.
TOTAL COST	42001.	-	42001.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	214.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	17.398*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.600	0.900	ELECT VOL FRACTION	0.100*
DESIGN REPEAT	0.200	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	19978*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(24)	SEP 93*	(11)	AUG 94*	(35)

SUPPLEMENTAL INFORMATION	
ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

MECHANICAL ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:44
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PM SPT MOD PRES VESSEL MM

	UNIT WEIGHT	105.00	MODE	2
PROTOTYPE QUANTITY	7.300 UNIT VOLUME	28.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING	686.	-	686.
DRAFTING	2320.	-	2320.
DESIGN	319.	-	319.
SYSTEMS	384.	-	384.
PROJECT MGMT	123.	-	123.
DATA	3832.	-	3832.
SUBTOTAL (ENG)			
MANUFACTURING	-	-	-
PRODUCTION	2013.	-	2013.
PROTOTYPE	162.	-	162.
TOOL-TEST EQ	2174.	-	2174.
SUBTOTAL (MFG)			
TOTAL COST	6006.	-	6006.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	105.000	ENGINEERING COMPLEXITY	1.000
DENSITY	3.750*	PROTOTYPE SUPPORT	1.0
FG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	32434*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (7)	AUG 93* (23)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

PRICE HARDWARE MODEL
ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:45
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	34.57	MODE	1
PROTOTYPE QUANTITY	6.300 UNIT VOLUME	1.53	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	775.	-	775.
DESIGN	2845.	-	2845.
SYSTEMS	317.	-	317.
PROJECT MGMT	369.	-	369.
DATA	117.	-	117.
SUBTOTAL (ENG)	4424.	-	4424.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2214.	-	2214.
TOOL-TEST EQ	282.	-	282.
SUBTOTAL (MFG)	2496.	-	2496.
TOTAL COST	6920.	-	6920.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.620*	22.951*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.071	7.363	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.217*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	75715*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (8)	OCT 93* (25)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:45
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

1' 3T W/PM

	UNIT WEIGHT	45.61	MODE	1
PROTOTYPE QUANTITY	7.000 UNIT VOLUME	2.27	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	776.	-	776.
DESIGN	2848.	-	2848.
SYSTEMS	319.	-	319.
PROJECT MGMT	383.	-	383.
DATA	119.	-	119.
SUBTOTAL (ENG)	4446.	-	4446.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2343.	-	2343.
TOOL-TEST EQ	290.	-	290.
SUBTOTAL (MFG)	2633.	-	2633.
 TOTAL COST	 7079.	 -	 7079.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.574*	34.033*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
DESIGN COMPLEXITY	9.929	7.395	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.146*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	73009*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(17)	FEB 93*	(8)	OCT 93*	(25)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:45
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

STRUCTURE DM

	UNIT WEIGHT	50.00	MODE	2
PROTOTYPE QUANTITY	5.000 UNIT VOLUME	39.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	192.	-	192.
DESIGN	673.	-	673.
SYSTEMS	120.	-	120.
PROJECT MGMT	155.	-	155.
DATA	51.	-	51.
SUBTOTAL (ENG)	1191.	-	1191.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	817.	-	817.
TOOL-TEST EQ	75.	-	75.
SUBTOTAL (MFG)	892.	-	892.
 TOTAL COST	 2082.	 -	 2082.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	50.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.282*	PROTOTYPE SUPPORT	1.0
DESIGN COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	40520*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (5)	MAY 93* (20)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:45
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

QV DM

	UNIT WEIGHT	210.00	MODE	1
PROTOTYPE QUANTITY	5.600 UNIT VOLUME	3.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			834.
DRAFTING	834.	-	3048.
DESIGN	3048.	-	343.
SYSTEMS	343.	-	679.
PROJECT MGMT	679.	-	178.
DATA	178.	-	5081.
SUBTOTAL (ENG)	5081.	-	
MANUFACTURING			-
PRODUCTION	-	-	8160.
PROTOTYPE	8160.	-	1035.
TOOL-TEST EQ	1035.	-	9195.
SUBTOTAL (MFG)	9195.	-	
TOTAL COST	14276.	-	14276.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	40.000*	170.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	56.667*	PROTOTYPE SUPPORT	1.0
3. COMPLEXITY	10.057	7.954	PROTO SCHEDULE FACTOR	0.250*
HW DESIGN	0.500	0.200	ELECT VOL FRACTION	0.272*
DESIGN REPEAT	0.500	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	22458*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (20)	MAY 93* (9)	FEB 94* (29)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:45
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

H/ ISS DM

	UNIT WEIGHT	50.00	MODE	1
PROTOTYPE QUANTITY	5.200 UNIT VOLUME	4.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	312.	-	312.
DESIGN	1100.	-	1100.
SYSTEMS	109.	-	109.
PROJECT MGMT	159.	-	159.
DATA	50.	-	50.
SUBTOTAL (ENG)	1730.	-	1730.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1031.	-	1031.
TOOL-TEST EQ	129.	-	129.
SUBTOTAL (MFG)	1160.	-	1160.
TOTAL COST	2890.	-	2890.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	45.000	ENGINEERING COMPLEXITY	0.900
DENSITY	49.000	11.250*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.026*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (5)	MAY 93* (20)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:45
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	10.00	MODE	2
PROTOTYPE QUANTITY	4.100 UNIT VOLUME	0.20	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	99.	-	99.
DESIGN	318.	-	318.
SYSTEMS	48.	-	48.
PROJECT MGMT	44.	-	44.
DATA	16.	-	16.
SUBTOTAL (ENG)	525.	-	525.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	101.	-	101.
TOOL-TEST EQ	10.	-	10.
SUBTOTAL (MFG)	111.	-	111.
TOTAL COST	636.	-	636.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	10.000	ENGINEERING COMPLEXITY	1.000
DENSITY	50.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	80800*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (11)	AUG 92* (4)	DEC 92* (15)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:46
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

TTC DM

	UNIT WEIGHT	39.00	MODE	1
PROTOTYPE QUANTITY	10.900 UNIT VOLUME	2.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	36.	-	36.
DESIGN	95.	-	95.
SYSTEMS	2.	-	2.
PROJECT MGMT	454.	-	454.
DATA	84.	-	84.
SUBTOTAL (ENG)	671.	-	671.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	8021.	-	8021.
TOOL-TEST EQ	559.	-	559.
SUBTOTAL (MFG)	8580.	-	8580.
TOTAL COST	9251.	-	9251.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	22.000*	17.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	8.500*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
HW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.244*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	48164*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (13)	OCT 92* (7)	MAY 93* (20)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

FILE NAME: MODEL
ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:46
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GLOBAL FILENAME:
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	UNIT WEIGHT	150.00	MODE	1
PROTOTYPE QUANTITY	7.000 UNIT VOLUME	6.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	13.	-	13.
DESIGN	28.	-	28.
SYSTEMS	0.	-	0.
PROJECT MGMT	108.	-	108.
DATA	22.	-	22.
SUBTOTAL (ENG)	171.	-	171.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1684.	-	1684.
TOOL-TEST EQ	83.	-	83.
SUBTOTAL (MFG)	1767.	-	1767.
TOTAL COST	1938.	-	1938.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	145.000	ENGINEERING COMPLEXITY	0.200
DENSITY	42.000	24.167*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.050	0.200	ELECT VOL FRACTION	0.020*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	161130*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (8)	MAY 92* (4)	SEP 92* (12)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:46
(190172)GLOBAL FILENAME:
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	UNIT WEIGHT	50.00	MODE	1
PROTOTYPE QUANTITY	19.000 UNIT VOLUME	3.00	QUANTITY/NHA	3

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	167.	-	167.
DESIGN	546.	-	546.
SYSTEMS	30.	-	30.
PROJECT MGMT	244.	-	244.
DATA	55.	-	55.
SUBTOTAL (ENG)	1042.	-	1042.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2869.	-	2869.
TOOL-TEST EQ	262.	-	262.
SUBTOTAL (MFG)	3131.	-	3131.
TOTAL COST	4173.	-	4173.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	2.000*	48.000	ENGINEERING COMPLEXITY	0.600
DENSITY	49.000	16.000*	PROTOTYPE SUPPORT	1.0
WG. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
W DESIGN	0.800	0.200	ELECT VOL FRACTION	0.014*
DESIGN REPEAT	0.200	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.151	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	423050*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92* (8)	MAY 93* (20)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

PRICE HARDWARE MODEL
ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:46
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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PROTOTYPE QUANTITY	UNIT WEIGHT	48.43	MODE	1
	7.000 UNIT VOLUME	2.28	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	825.	-	825.
DESIGN	3006.	-	3006.
SYSTEMS	343.	-	343.
PROJECT MGMT	406.	-	406.
DATA	128.	-	128.
SUBTOTAL (ENG)	4707.	-	4707.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2393.	-	2393.
TOOL-TEST EQ	287.	-	287.
SUBTOTAL (MFG)	2680.	-	2680.
TOTAL COST	7387.	-	7387.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	14.221*	34.208*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.743	7.422	PROTO SCHEDULE FACTOR	0.250*
W DESIGN	0.500	0.500	ELECT VOL FRACTION	0.178*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	56537*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (7)	SEP 93* (24)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:46
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

G* CONTROL DM

	UNIT WEIGHT	98.00	MODE	1
PROTOTYPE QUANTITY	11.800 UNIT VOLUME	5.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	75.	-	75.
DESIGN	251.	-	251.
SYSTEMS	18.	-	18.
PROJECT MGMT	408.	-	408.
DATA	77.	-	77.
SUBTOTAL (ENG)	830.	-	830.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	6706.	-	6706.
TOOL-TEST EQ	645.	-	645.
SUBTOTAL (MFG)	7351.	-	7351.
TOTAL COST	8180.	-	8180.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	30.000*	68.000	ENGINEERING COMPLEXITY	0.700
DENSITY	44.000	13.600*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.150	ELECT VOL FRACTION	0.136*
DESIGN REPEAT	0.800	0.850	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.120	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	27834*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(16)	JAN 93*	(9)	OCT 93*	(25)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:47
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

INFORM PS DM

PROTOTYPE QUANTITY

UNIT WEIGHT
23.000 UNIT VOLUME10.00 MODE
0.50 QUANTITY/NHA1
4

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING		-	136.
DRAFTING	136.	-	464.
DESIGN	464.	-	32.
SYSTEMS	32.	-	244.
PROJECT MGMT	244.	-	51.
DATA	51.	-	927.
SUBTOTAL(ENG)	927.	-	
MANUFACTURING		-	-
PRODUCTION	-	-	3131.
PROTOTYPE	3131.	-	296.
TOOL-TEST EQ	296.	-	3427.
SUBTOTAL(MFG)	3427.	-	
TOTAL COST	4354.	-	4354.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	8.000*	2.000	ENGINEERING COMPLEXITY	0.700
DENSITY	40.000	4.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.950	ELECT VOL FRACTION	0.400*
DESIGN REPEAT	0.600	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	101657*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(14)	NOV 92*	(9)	AUG 93*	(23)

SUPPLEMENTAL INFORMATION	
ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:47
(190172)

GLOBAL FILENAME:
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G ANTENNA DM

	UNIT WEIGHT	1.00	MODE	1
PROTOTYPE QUANTITY	38.000 UNIT VOLUME	0.05	QUANTITY/NHA	7

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	4.	-	4.
DESIGN	11.	-	11.
SYSTEMS	0.	-	0.
PROJECT MGMT	27.	-	27.
DATA	5.	-	5.
SUBTOTAL(ENG)	48.	-	48.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	372.	-	372.
TOOL-TEST EQ	22.	-	22.
SUBTOTAL(MFG)	393.	-	393.
TOTAL COST	441.	-	441.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	0.500*	0.500	ENGINEERING COMPLEXITY	0.300
DENSITY	40.000	10.000*	PROTOTYPE SUPPORT	1.0
DESIGN COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.300	0.300	ELECT VOL FRACTION	0.250*
DESIGN REPEAT	0.700	0.700	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	1538786*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(6)	MAR 92*	(4)	JUL 92*	(10)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:47
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

GNC I&T

	UNIT WEIGHT	16.75	MODE	1
PROTOTYPE QUANTITY	8.000 UNIT VOLUME	0.37	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	511.	-	511.
DESIGN	1841.	-	1841.
SYSTEMS	217.	-	217.
PROJECT MGMT	245.	-	245.
DATA	79.	-	79.
SUBTOTAL(ENG)	2892.	-	2892.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1193.	-	1193.
TOOL-TEST EQ	132.	-	132.
SUBTOTAL(MFG)	1325.	-	1325.
TOTAL COST	4217.	-	4217.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.194*	5.553*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.256	6.853	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.864*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	61724*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(14)	NOV 92*	(7)	JUN 93*	(21)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:47
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

STRUCTURE, PROPULSION SUBMOD.

PROTOTYPE QUANTITY	UNIT WEIGHT	150.00	MODE	2
	5.000 UNIT VOLUME	38.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	393.	-	393.
DESIGN	1380.	-	1380.
SYSTEMS	245.	-	245.
PROJECT MGMT	352.	-	352.
DATA	111.	-	111.
SUBTOTAL(ENG)	2481.	-	2481.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2148.	-	2148.
TOOL-TEST EQ	197.	-	197.
SUBTOTAL(MFG)	2345.	-	2345.
TOTAL COST	4826.	-	4826.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	150.000	ENGINEERING COMPLEXITY	1.200
DENSITY	3.947*	PROTOTYPE SUPPORT	1.0
WG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.900	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	29143*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (7)	AUG 93* (23)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

MECHANICAL ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:47
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PULSION DM

	UNIT WEIGHT	141.00	MODE	2
PROTOTYPE QUANTITY	4.300 UNIT VOLUME	10.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	97.	-	97.
DESIGN	352.	-	352.
SYSTEMS	40.	-	40.
PROJECT MGMT	690.	-	690.
DATA	135.	-	135.
SUBTOTAL (ENG)	1314.	-	1314.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	13988.	-	13988.
TOOL-TEST EQ	1752.	-	1752.
SUBTOTAL (MFG)	15740.	-	15740.
TOTAL COST	17054.	-	17054.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	141.000	ENGINEERING COMPLEXITY	1.000
DENSITY	14.100*	PROTOTYPE SUPPORT	1.0
FG. COMPLEXITY	9.669	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	PLATFORM	2.000
DESIGN REPEAT	0.800	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	14219*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (24)	SEP 93* (9)	JUN 94* (33)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

MECHANICAL ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:48
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PULSION SUBMOD. I&T

	UNIT WEIGHT	17.78	MODE	2
PROTOTYPE QUANTITY	5.000 UNIT VOLUME	1.19	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	149.	-	149.
DESIGN	511.	-	511.
SYSTEMS	66.	-	66.
PROJECT MGMT	85.	-	85.
DATA	27.	-	27.
SUBTOTAL (ENG)	838.	-	838.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	602.	-	602.
TOOL-TEST EQ	60.	-	60.
SUBTOTAL (MFG)	661.	-	661.
TOTAL COST	1499.	-	1499.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	17.784*	ENGINEERING COMPLEXITY	1.000
DENSITY	15.000*	PROTOTYPE SUPPORT	1.0
FG. COMPLEXITY	8.436	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	40944*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (5)	MAY 93* (20)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:48
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

DM T&T

	UNIT WEIGHT	47.07	MODE	1
PROTOTYPE QUANTITY	7.000 UNIT VOLUME	2.05	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	865.	-	865.
DESIGN	3130.	-	3130.
SYSTEMS	363.	-	363.
PROJECT MGMT	432.	-	432.
DATA	136.	-	136.
SUBTOTAL (ENG)	4927.	-	4927.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2549.	-	2549.
TOOL-TEST EQ	295.	-	295.
SUBTOTAL (MFG)	2844.	-	2844.
TOTAL COST	7771.	-	7771.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.283*	30.791*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.546	7.938	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.227*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	46698*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (7)	AUG 93* (23)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL7

23-AUG-90 11:48
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

A AD ADAPTER

	UNIT WEIGHT	1000.00	MODE	1
PROTOTYPE QUANTITY	9.800 UNIT VOLUME	249.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING		-	515.
DRAFTING	515.	-	1650.
DESIGN	1650.	-	94.
SYSTEMS	94.	-	1149.
PROJECT MGMT	1149.	-	244.
DATA	244.	-	3653.
SUBTOTAL (ENG)	3653.	-	
MANUFACTURING		-	-
PRODUCTION	-	-	16551.
PROTOTYPE	16551.	-	1509.
TOOL-TEST EQ	1509.	-	18060.
SUBTOTAL (MFG)	18060.	-	
TOTAL COST	21712.	-	21712.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	995.000	ENGINEERING COMPLEXITY	0.600
DENSITY	42.000	3.996*	PROTOTYPE SUPPORT	1.0
ENG. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.200	ELECT VOL FRACTION	0.000*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.134	0.263	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (9)	SEP 93* (24)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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INPUT FILENAME: TOTAL7

23-AUG-90 11:48
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TOTAL SYSTEM I&T

PROTOTYPE QUANTITY	INT WEIGHT 7.000	INT VOLUME	82.197* MODE 4.184* QUANTITY/HNA	5 0
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PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1093.	-	1093.
DESIGN	3984.	-	3984.
SYSTEMS	454.	-	454.
PROJECT MGMT	560.	-	560.
DATA	173.	-	173.
SUBTOTAL (ENG)	6264.	-	6264.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3587.	-	3587.
TOOL-TEST EQ	427.	-	427.
SUBTOTAL (MFG)	4014.	-	4014.
TOTAL COST	10278.	-	10278.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	19.430*	62.767*	ENGINEERING COMPLEXITY	1.000*
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.734*	7.658*	PROTO SCHEDULE FACTOR	0.250*
FW PLANS LEVEL	0.500	0.500	ELECT VOL FRACTION	0.133
INTEGRATION LEVEL	0.000	0.000	PLATFORM	2.000
			YEAR OF TECHNOLOGY	1991*
			RELIABILITY FACTOR	1.0
			MTBF(FIELD)	41531*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (8)	OCT 93* (25)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192	TOOLING & PROCESS FACTORS	
ESCALATION	0.00	DEVELOPMENT TOOLING	1.00*
AMORTIZED UNIT COST	0.00*	PRODUCTION TOOLING	1.00*
DEV COST MULTIPLIER	1.00*		
PROD COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
SYSTEM COST SUMMARY

INPUT FILENAME: TOTAL7

23-AUG-90 11:48
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TOTAL COST, WITH INTEGRATION COST

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	16604.	-	16604.
DESIGN	59539.	-	59539.
SYSTEMS	6955.	-	6955.
PROJ MGMT	14067.	-	14067.
DATA	3723.	-	3723.
SUBTOTAL(ENG)	100888.	-	100888.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	149669.	-	149669.
TOOL-TEST EQ	16471.	-	16471.
PURCH ITEMS	0.	-	0.
SUBTOTAL(MFG)	166139.	-	166139.
TOTAL COST	267027.	-	267027.

Restart the Program (Y/N)? Y

PRICE H Model
(190172)

- 1 Specify Custom Global Data File
- 2 Specify Custom Escalation Rate File

Restart the Program (Y/N)?

Enter Input Data Filename:

Run 8: ETV, prototypes, 1st flight unit (Compare to Run 3)
Develop start 10/1/91
1st item completion (ETV) calculated
Test unit completion 9/30/93

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:33
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

STRCU MM

PROTOTYPE QUANTITY	UNIT WEIGHT	309.00	MODE	2
	3.600 UNIT VOLUME	172.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	770.	-	770.
DESIGN	2934.	-	2934.
SYSTEMS	456.	-	456.
PROJECT MGMT	727.	-	727.
DATA	206.	-	206.
SUBTOTAL (ENG)	5093.	-	5093.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3042.	-	3042.
TOOL-TEST EQ	281.	-	281.
SUBTOTAL (MFG)	3323.	-	3323.
TOTAL COST	8416.	-	8416.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS
WEIGHT	309.000	ENGINEERING COMPLEXITY 1.200
DENSITY	1.797*	PROTOTYPE SUPPORT 1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR 0.250*
NEW DESIGN	0.950	PLATFORM 2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY 1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR 1.0
		MTBF (FIELD) 23462*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93* (18)	SEP 94 (36)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
EV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS
DEVELOPMENT TOOLING 1.00*

ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:33
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

POWER MM

	UNIT WEIGHT	100.00	MODE	1
PROTOTYPE QUANTITY	4.200	UNIT VOLUME	1.50	QUANTITY/NHA 1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	10.	-	10.
DESIGN	42.	-	42.
SYSTEMS	4.	-	4.
PROJECT MGMT	324.	-	324.
DATA	48.	-	48.
SUBTOTAL (ENG)	427.	-	427.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	4181.	-	4181.
TOOL-TEST EQ	545.	-	545.
SUBTOTAL (MFG)	4726.	-	4726.
TOTAL COST	5153.	-	5153.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	32.000*	68.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	45.333*	PROTOTYPE SUPPORT	1.0
PG. COMPLEXITY	10.057	7.810	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.050	0.050	ELECT VOL FRACTION	0.435*
DESIGN REPEAT	0.950	0.950	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	27948*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92* (24)	SEP 94 (36)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS
DEVELOPMENT TOOLING 1.00*

ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:33
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

HARNESS MM

	UNIT WEIGHT	35.00	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	2.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	323.	-	323.
DESIGN	1276.	-	1276.
SYSTEMS	105.	-	105.
PROJECT MGMT	177.	-	177.
DATA	48.	-	48.
SUBTOTAL (ENG)	1929.	-	1929.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	582.	-	582.
TOOL-TEST EQ	78.	-	78.
SUBTOTAL (MFG)	660.	-	660.
TOTAL COST	2589.	-	2589.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	30.000	ENGINEERING COMPLEXITY	0.900
DENSITY	49.000	15.000*	PROTOTYPE SUPPORT	1.0
PG. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.051*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(15)	DEC 92*	(21)	SEP 94	(36)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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INPUT FILENAME: TOTAL8

23-AUG-90 12:33
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

RMAL MM

PROTOTYPE QUANTITY	UNIT WEIGHT	45.00	MODE	1
	3.600 UNIT VOLUME	1.50	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1029.	-	1029.
DESIGN	4098.	-	4098.
SYSTEMS	403.	-	403.
PROJECT MGMT	462.	-	462.
DATA	139.	-	139.
SUBTOTAL (ENG)	6131.	-	6131.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	785.	-	785.
TOOL-TEST EQ	105.	-	105.
SUBTOTAL (MFG)	891.	-	891.
TOTAL COST	7022.	-	7022.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	6.000*	39.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	26.000*	PROTOTYPE SUPPORT	1.0
FG. COMPLEXITY	9.800	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.950	ELECT VOL FRACTION	0.091*
DESIGN REPEAT	0.000	0.300	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	133907*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (20)	SEP 94 (36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:33
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

MM

	UNIT WEIGHT	421.00	MODE	2
PROTOTYPE QUANTITY	1.900 UNIT VOLUME	11.70	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1984.	-	1984.
DESIGN	7132.	-	7132.
SYSTEMS	887.	-	887.
PROJECT MGMT	1004.	-	1004.
DATA	317.	-	317.
SUBTOTAL (ENG)	11323.	-	11323.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2101.	-	2101.
TOOL-TEST EQ	210.	-	210.
SUBTOTAL (MFG)	2312.	-	2312.
TOTAL COST	13635.	-	13635.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	421.000	ENGINEERING COMPLEXITY	1.000
DENSITY	35.983*	PROTOTYPE SUPPORT	1.0
TG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	21383*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93* (18)	SEP 94 (36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:33
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

TTC MM

UNIT WEIGHT	20.00	MODE	1
PROTOTYPE QUANTITY	3.700	UNIT VOLUME	3.00
		QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	30.	-	30.
DESIGN	90.	-	90.
SYSTEMS	2.	-	2.
PROJECT MGMT	183.	-	183.
DATA	30.	-	30.
SUBTOTAL (ENG)	335.	-	335.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2134.	-	2134.
TOOL-TEST EQ	155.	-	155.
SUBTOTAL (MFG)	2290.	-	2290.
TOTAL COST	2624.	-	2624.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.000*	4.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	1.333*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
HW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.119*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	65805*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92* (24)	SEP 94 (36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	191*	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

MECHANICAL ITEM

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23-AUG-90 12:33
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

ECLSS MM

	UNIT WEIGHT	127.00	MODE	2
PROTOTYPE QUANTITY	3.100 UNIT VOLUME	6.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	246.	-	246.
DESIGN	879.	-	879.
SYSTEMS	93.	-	93.
PROJECT MGMT	188.	-	188.
DATA	49.	-	49.
SUBTOTAL (ENG)	1455.	-	1455.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	691.	-	691.
TOOL-TEST EQ	58.	-	58.
SUBTOTAL (MFG)	749.	-	749.
TOTAL COST	2204.	-	2204.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	127.000	ENGINEERING COMPLEXITY	0.900
DENSITY	21.167*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.900	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	37694*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (13)	OCT 92* (23)	SEP 94 (36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:34
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

1M LESS PM I&T

	UNIT WEIGHT	47.30	MODE	1
PROTOTYPE QUANTITY	2.000 UNIT VOLUME	2.75	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	604.	-	604.
DESIGN	2430.	-	2430.
SYSTEMS	235.	-	235.
PROJECT MGMT	281.	-	281.
DATA	83.	-	83.
SUBTOTAL(ENG)	3632.	-	3632.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	478.	-	478.
TOOL-TEST EQ	69.	-	69.
SUBTOTAL(MFG)	547.	-	547.
TOTAL COST	4180.	-	4180.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	6.034*	41.264*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
WG. COMPLEXITY	9.708	7.297	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.063*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	129634*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(14)	NOV 92*	(22)	SEP 94	(36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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23-AUG-90 12:34
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PM EXP MOD MM

PROTOTYPE QUANTITY	UNIT WEIGHT	132.00	MODE	1
	3.300 UNIT VOLUME	14.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	259.	-	259.
DESIGN	1004.	-	1004.
SYSTEMS	100.	-	100.
PROJECT MGMT	554.	-	554.
DATA	110.	-	110.
SUBTOTAL (ENG)	2027.	-	2027.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	8650.	-	8650.
TOOL-TEST EQ	1237.	-	1237.
SUBTOTAL (MFG)	9887.	-	9887.
TOTAL COST	11914.	-	11914.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	78.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	5.571*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
FW DESIGN	0.400	0.750	ELECT VOL FRACTION	0.088*
SIGN REPEAT	0.900	0.900	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	19978*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (22)	JUL 93* (14)	SEP 94 (36)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:35
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

SPT MOD MM

PROTOTYPE QUANTITY	UNIT WEIGHT	268.00	MODE	1
	3.300 UNIT VOLUME	12.30	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	3366.	-	3366.
DESIGN	12810.	-	12810.
SYSTEMS	1323.	-	1323.
PROJECT MGMT	1609.	-	1609.
DATA	491.	-	491.
SUBTOTAL (ENG)	19599.	-	19599.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	9811.	-	9811.
TOOL-TEST EQ	1410.	-	1410.
SUBTOTAL (MFG)	11220.	-	11220.
TOTAL COST	30819.	-	30819.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	214.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	17.398*	PROTOTYPE SUPPORT	1.0
FG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
W DESIGN	0.600	0.900	ELECT VOL FRACTION	0.100*
DESIGN REPEAT	0.200	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	19978*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (24)	SEP 93* (12)	SEP 94 (36)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

MECHANICAL ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:35
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PM SPT MOD PRES VESSEL MM

PROTOTYPE QUANTITY	UNIT WEIGHT	105.00	MODE	2
	3.300 UNIT VOLUME	28.00	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	779.	-	779.
DESIGN	2876.	-	2876.
SYSTEMS	342.	-	342.
PROJECT MGMT	429.	-	429.
DATA	127.	-	127.
SUBTOTAL (ENG)	4554.	-	4554.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1000.	-	1000.
TOOL-TEST EQ	88.	-	88.
SUBTOTAL (MFG)	1088.	-	1088.
TOTAL COST	5642.	-	5642.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS
WEIGHT	105.000	ENGINEERING COMPLEXITY 1.000
DENSITY	3.750*	PROTOTYPE SUPPORT 1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR 0.250*
EW DESIGN	0.950	PLATFORM 2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY 1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR 1.0
		MTBF (FIELD) 32434*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (20)	SEP 94 (36)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS
DEVELOPMENT TOOLING 1.00*

INPUT FILENAME: TOTAL8

23-AUG-90 12:35
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PM SPT MOD PRES VESSEL MM

PROTOTYPE QUANTITY	UNIT WEIGHT	105.00	MODE	2
	3.300 UNIT VOLUME	28.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	779.	-	779.
DESIGN	2876.	-	2876.
SYSTEMS	342.	-	342.
PROJECT MGMT	429.	-	429.
DATA	127.	-	127.
SUBTOTAL (ENG)	4554.	-	4554.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1000.	-	1000.
TOOL-TEST EQ	88.	-	88.
SUBTOTAL (MFG)	1088.	-	1088.
TOTAL COST	5642.	-	5642.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	105.000	ENGINEERING COMPLEXITY	1.000
DENSITY	3.750*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
EW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	32434*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (20)	SEP 94 (36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:36
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PM I&T

	UNIT WEIGHT	34.57	MODE	1
PROTOTYPE QUANTITY	2.000 UNIT VOLUME	1.53	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	862.	-	862.
DESIGN	3416.	-	3416.
SYSTEMS	336.	-	336.
PROJECT MGMT	382.	-	382.
DATA	116.	-	116.
SUBTOTAL (ENG)	5113.	-	5113.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	826.	-	826.
TOOL-TEST EQ	120.	-	120.
SUBTOTAL (MFG)	946.	-	946.
TOTAL COST	6059.	-	6059.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.620*	22.951*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
WG. COMPLEXITY	10.071	7.363	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.217*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	75715*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (19)	SEP 94 (36)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:36
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

1M T&T W/PM

UNIT WEIGHT	45.61	MODE	1
PROTOTYPE QUANTITY	2.000	UNIT VOLUME	2.27
		QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	867.	-	867.
DESIGN	3440.	-	3440.
SYSTEMS	339.	-	339.
PROJECT MGMT	390.	-	390.
DATA	118.	-	118.
SUBTOTAL(ENG)	5154.	-	5154.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	796.	-	796.
TOOL-TEST EQ	114.	-	114.
SUBTOTAL(MFG)	910.	-	910.
TOTAL COST	6064.	-	6064.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.574*	34.033*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
WG. COMPLEXITY	9.929	7.395	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.146*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	73009*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(17)	FEB 93*	(19)	SEP 94	(36)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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PRICE HARDWARE MODEL
MECHANICAL ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:37
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

JECTURE DM

	UNIT WEIGHT	50.00	MODE	2
PROTOTYPE QUANTITY	2.000 UNIT VOLUME	39.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	226.	-	226.
DESIGN	888.	-	888.
SYSTEMS	131.	-	131.
PROJECT MGMT	175.	-	175.
DATA	52.	-	52.
SUBTOTAL (ENG)	1472.	-	1472.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	367.	-	367.
TOOL-TEST EQ	39.	-	39.
SUBTOTAL (MFG)	407.	-	407.
 TOTAL COST	 1879.	 -	 1879.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	50.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.282*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	40520*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(15)	DEC 92*	(21)	SEP 94	(36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:37
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PC R DM

PROTOTYPE QUANTITY	UNIT WEIGHT	210.00	MODE	1
	1.600 UNIT VOLUME	3.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			895.
DRAFTING	895.	-	895.
DESIGN	3447.	-	3447.
SYSTEMS	356.	-	356.
PROJECT MGMT	490.	-	490.
DATA	140.	-	140.
SUBTOTAL (ENG)	5328.	-	5328.
MANUFACTURING			-
PRODUCTION	-	-	-
PROTOTYPE	2797.	-	2797.
TOOL-TEST EQ	410.	-	410.
SUBTOTAL (MFG)	3207.	-	3207.
TOTAL COST	8535.	-	8535.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	40.000*	170.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	56.667*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.057	7.954	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.200	ELECT VOL FRACTION	0.272*
DESIGN REPEAT	0.500	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	22458*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (20)	MAY 93* (16)	SEP 94 (36)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:38
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

NESS DM

	UNIT WEIGHT	50.00	MODE	1
PROTOTYPE QUANTITY	1.200 UNIT VOLUME	4.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	366.	-	366.
DESIGN	1445.	-	1445.
SYSTEMS	119.	-	119.
PROJECT MGMT	175.	-	175.
DATA	51.	-	51.
SUBTOTAL(ENG)	2157.	-	2157.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	297.	-	297.
TOOL-TEST EQ	48.	-	48.
SUBTOTAL(MFG)	345.	-	345.
 TOTAL COST	 2502.	 -	 2502.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	45.000	ENGINEERING COMPLEXITY	0.900
DENSITY	49.000	11.250*	PROTOTYPE SUPPORT	1.0
CFG. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.026*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	172349*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(15)	DEC 92*	(21)	SEP 94	(36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:38
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

T RMAL DM

	UNIT WEIGHT	10.00	MODE	2
PROTOTYPE QUANTITY	1.100 UNIT VOLUME	0.20	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	124.	-	124.
DESIGN	465.	-	465.
SYSTEMS	55.	-	55.
PROJECT MGMT	65.	-	65.
DATA	20.	-	20.
SUBTOTAL(ENG)	728.	-	728.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	32.	-	32.
TOOL-TEST EQ	5.	-	5.
SUBTOTAL(MFG)	38.	-	38.
 TOTAL COST	 766.	 -	 766.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	10.000	ENGINEERING COMPLEXITY	1.000
DENSITY	50.000*	PROTOTYPE SUPPORT	1.0
ENG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	80800*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (11)	AUG 92* (25)	SEP 94 (36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:38
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

DM

	UNIT WEIGHT	39.00	MODE	1
PROTOTYPE QUANTITY	2.900 UNIT VOLUME	2.00	QUANTITY/NHA	2

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	41.	-	41.
DESIGN	122.	-	122.
SYSTEMS	2.	-	2.
PROJECT MGMT	218.	-	218.
DATA	37.	-	37.
SUBTOTAL (ENG)	421.	-	421.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2546.	-	2546.
TOOL-TEST EQ	187.	-	187.
SUBTOTAL (MFG)	2733.	-	2733.
TOTAL COST	3154.	-	3154.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	22.000*	17.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	8.500*	PROTOTYPE SUPPORT	1.0
DESIGN COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.244*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	48164*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(13)	OCT 92*	(23)	SEP 94	(36)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:39
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

R S DM

	UNIT WEIGHT	150.00	MODE	1
PROTOTYPE QUANTITY	2.000 UNIT VOLUME	6.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	16.	-	16.
DESIGN	43.	-	43.
SYSTEMS	1.	-	1.
PROJECT MGMT	71.	-	71.
DATA	12.	-	12.
SUBTOTAL (ENG)	143.	-	143.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	560.	-	560.
TOOL-TEST EQ	32.	-	32.
SUBTOTAL (MFG)	592.	-	592.
TOTAL COST	735.	-	735.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	145.000	ENGINEERING COMPLEXITY	0.200
DENSITY	42.000	24.167*	PROTOTYPE SUPPORT	1.0
DESIGN COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.050	0.200	ELECT VOL FRACTION	0.020*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	161130*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (8)	MAY 92* (28)	SEP 94 (36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:40
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	50.00	MODE	1
PROTOTYPE QUANTITY	7.000 UNIT VOLUME	3.00	QUANTITY/NHA	3

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	194.	-	194.
DESIGN	697.	-	697.
SYSTEMS	33.	-	33.
PROJECT MGMT	197.	-	197.
DATA	44.	-	44.
SUBTOTAL (ENG)	1164.	-	1164.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1169.	-	1169.
TOOL-TEST EQ	113.	-	113.
SUBTOTAL (MFG)	1282.	-	1282.
TOTAL COST	2445.	-	2445.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	2.000*	48.000	ENGINEERING COMPLEXITY	0.600
DENSITY	49.000	16.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.800	0.200	ELECT VOL FRACTION	0.014*
DESIGN REPEAT	0.200	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.151	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	423050*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(12)	SEP 92*	(24)	SEP 94	(36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:40
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

DM LESS GNC I&T

	UNIT WEIGHT	48.43	MODE	1
PROTOTYPE QUANTITY	2.000 UNIT VOLUME	2.28	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	925.	-	925.
DESIGN	3657.	-	3657.
SYSTEMS	365.	-	365.
PROJECT MGMT	420.	-	420.
DATA	127.	-	127.
SUBTOTAL (ENG)	5493.	-	5493.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	812.	-	812.
TOOL-TEST EQ	114.	-	114.
SUBTOTAL (MFG)	926.	-	926.
TOTAL COST	6419.	-	6419.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	14.221*	34.208*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
PG. COMPLEXITY	9.743	7.422	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.178*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	56537*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(17)	FEB 93*	(19)	SEP 94	(36)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

PRICE HARDWARE MODEL
ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:40
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

G* CONTROL DM

	UNIT WEIGHT	98.00	MODE	1
PROTOTYPE QUANTITY	3.800 UNIT VOLUME	5.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	83.	-	83.
DESIGN	299.	-	299.
SYSTEMS	19.	-	19.
PROJECT MGMT	215.	-	215.
DATA	39.	-	39.
SUBTOTAL (ENG)	655.	-	655.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2485.	-	2485.
TOOL-TEST EQ	258.	-	258.
SUBTOTAL (MFG)	2744.	-	2744.
TOTAL COST	3399.	-	3399.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	30.000*	68.000	ENGINEERING COMPLEXITY	0.700
DENSITY	44.000	13.600*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.150	ELECT VOL FRACTION	0.136*
DESIGN REPEAT	0.800	0.850	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.120	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	27834*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (20)	SEP 94 (36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:41
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

GM GPS DM

	UNIT WEIGHT	10.00	MODE	1
PROTOTYPE QUANTITY	7.000 UNIT VOLUME	0.50	QUANTITY/NHA	4

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	152.	-	152.
DESIGN	557.	-	557.
SYSTEMS	34.	-	34.
PROJECT MGMT	155.	-	155.
DATA	34.	-	34.
SUBTOTAL (ENG)	933.	-	933.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1086.	-	1086.
TOOL-TEST EQ	108.	-	108.
SUBTOTAL (MFG)	1194.	-	1194.
TOTAL COST	2127.	-	2127.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	8.000*	2.000	ENGINEERING COMPLEXITY	0.700
DENSITY	40.000	4.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.950	ELECT VOL FRACTION	0.400*
DESIGN REPEAT	0.600	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	101657*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(14)	NOV 92*	(22)	SEP 94	(36)

SUPPLEMENTAL INFORMATION	
ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:41
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

NO ANTENNA DM

	UNIT WEIGHT	1.00	MODE	1
PROTOTYPE QUANTITY	10.000 UNIT VOLUME	0.05	QUANTITY/NHA	7

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	5.	-	5.
DESIGN	16.	-	16.
SYSTEMS	0.	-	0.
PROJECT MGMT	15.	-	15.
DATA	3.	-	3.
SUBTOTAL (ENG)	40.	-	40.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	112.	-	112.
TOOL-TEST EQ	7.	-	7.
SUBTOTAL (MFG)	119.	-	119.
TOTAL COST	159.	-	159.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	0.500*	0.500	ENGINEERING COMPLEXITY	0.300
DENSITY	40.000	10.000*	PROTOTYPE SUPPORT	1.0
ENG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
W DESIGN	0.300	0.300	ELECT VOL FRACTION	0.250*
DESIGN REPEAT	0.700	0.700	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	1538786*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(6)	MAR 92*	(30)	SEP 94	(36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:42
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

GNT I&T

	UNIT WEIGHT	16.75	MODE	1
PROTOTYPE QUANTITY	6.000 UNIT VOLUME	0.37	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	590.	-	590.
DESIGN	2345.	-	2345.
SYSTEMS	235.	-	235.
PROJECT MGMT	316.	-	316.
DATA	88.	-	88.
SUBTOTAL (ENG)	3574.	-	3574.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	926.	-	926.
TOOL-TEST EQ	106.	-	106.
SUBTOTAL (MFG)	1031.	-	1031.
TOTAL COST	4605.	-	4605.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.194*	5.553*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
CG. COMPLEXITY	9.256	6.853	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.864*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	61724*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(14)	NOV 92*	(22)	SEP 94	(36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:42
(190172)

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STRUCTURE, PROPULSION SUBMOD.

	UNIT WEIGHT	150.00	MODE	2
PROTOTYPE QUANTITY	2.000 UNIT VOLUME	38.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	449.	-	449.
DESIGN	1737.	-	1737.
SYSTEMS	264.	-	264.
PROJECT MGMT	360.	-	360.
DATA	108.	-	108.
SUBTOTAL (ENG)	2919.	-	2919.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	967.	-	967.
TOOL-TEST EQ	102.	-	102.
SUBTOTAL (MFG)	1069.	-	1069.
TOTAL COST	3987.	-	3987.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	150.000	ENGINEERING COMPLEXITY	1.200
DENSITY	3.947*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.900	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	29143*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (20)	SEP 94 (36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

23-AUG-90 12:42
(190172)

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	UNIT WEIGHT	141.00	MODE	2	
PROTOTYPE QUANTITY	1.300	UNIT VOLUME	10.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	100.	-	100.
DESIGN	373.	-	373.
SYSTEMS	41.	-	41.
PROJECT MGMT	294.	-	294.
DATA	59.	-	59.
SUBTOTAL (ENG)	868.	-	868.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	5074.	-	5074.
TOOL-TEST EQ	692.	-	692.
SUBTOTAL (MFG)	5766.	-	5766.
TOTAL COST	6633.	-	6633.

DESIGN FACTORS		MECHANICAL		PRODUCT DESCRIPTORS	
WEIGHT	141.000			ENGINEERING COMPLEXITY	1.000
DENSITY	14.100*			PROTOTYPE SUPPORT	1.0
CFG. COMPLEXITY	9.669			PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200			PLATFORM	2.000
DESIGN REPEAT	0.800			YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097			RELIABILITY FACTOR	1.0
				MTBF (FIELD)	14219*

SCHEDULE DEVELOPMENT	START	FIRST ITEM	FINISH
	OCT 91 (24)	SEP 93* (12)	SEP 94 (36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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23-AUG-90 12:43
(190172)

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PROPULSION SUBMOD. I&T

	UNIT WEIGHT	17.78	MODE	2
PROTOTYPE QUANTITY	2.000 UNIT VOLUME	1.19	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	175.	-	175.
DESIGN	672.	-	672.
SYSTEMS	73.	-	73.
PROJECT MGMT	97.	-	97.
DATA	27.	-	27.
SUBTOTAL (ENG)	1043.	-	1043.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	272.	-	272.
TOOL-TEST EQ	31.	-	31.
SUBTOTAL (MFG)	303.	-	303.
TOTAL COST	1346.	-	1346.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS
WEIGHT	17.784*	ENGINEERING COMPLEXITY 1.000
DENSITY	15.000*	PROTOTYPE SUPPORT 1.0
MFG. COMPLEXITY	8.436	PROTO SCHEDULE FACTOR 0.250*
FW DESIGN	0.500	PLATFORM 2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY 1991*
INTEGRATION LEVEL	0.350	RELIABILITY FACTOR 1.0
		MTBF (FIELD) 40944*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92* (21)	SEP 94 (36)

SUPPLEMENTAL INFORMATION	TOOLING & PROCESS FACTORS
ECONOMIC BASE 192	DEVELOPMENT TOOLING 1.00*
ESCALATION 0.00	
DEV COST MULTIPLIER 1.00*	

INPUT FILENAME: TOTAL8

23-AUG-90 12:44
(190172)GLOBAL FILENAME:
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M T

PROTOTYPE QUANTITY

UNIT WEIGHT
2.000 UNIT VOLUME47.07 MODE
2.05 QUANTITY/NHA1
1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING	978.	-	978.
DRAFTING	3854.	-	3854.
DESIGN	388.	-	388.
SYSTEMS	453.	-	453.
PROJECT MGMT	136.	-	136.
DATA	5808.	-	5808.
SUBTOTAL (ENG)			
MANUFACTURING	-	-	-
PRODUCTION	864.	-	864.
PROTOTYPE	117.	-	117.
TOOL-TEST EQ	981.	-	981.
SUBTOTAL (MFG)			
TOTAL COST	6789.	-	6789.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.283*	30.791*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.546	7.938	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.227*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	46698*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93* (20)	SEP 94 (36)

SUPPLEMENTAL INFORMATION	
ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

PRICE HARDWARE MODEL
ELECTRONIC ITEM

INPUT FILENAME: TOTAL8

23-AUG-90 12:44
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PC LOAD ADAPTER

	UNIT WEIGHT	1000.00	MODE	1
PROTOTYPE QUANTITY	5.800 UNIT VOLUME	249.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	579.	-	579.
DESIGN	2007.	-	2007.
SYSTEMS	101.	-	101.
PROJECT MGMT	1037.	-	1037.
DATA	205.	-	205.
SUBTOTAL (ENG)	3929.	-	3929.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	10374.	-	10374.
TOOL-TEST EQ	966.	-	966.
SUBTOTAL (MFG)	11341.	-	11341.
TOTAL COST	15269.	-	15269.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	995.000	ENGINEERING COMPLEXITY	0.600
DENSITY	42.000	3.996*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.200	ELECT VOL FRACTION	0.000*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.134	0.263	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(15)	DEC 92*	(21)	SEP 94	(36)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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INTEGRATION AND TEST

INPUT FILENAME: TOTAL8

23-AUG-90 12:44
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TOTAL SYSTEM I&T

	INT WEIGHT	82.197* MODE	5
PROTOTYPE QUANTITY	2.000 INT VOLUME	4.184* QUANTITY/HNA	0

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING		-	1213.
DRAFTING	1213.	-	4758.
DESIGN	4758.	-	481.
SYSTEMS	481.	-	553.
PROJECT MGMT	553.	-	168.
DATA	168.	-	7172.
SUBTOTAL (ENG)	7172.	-	
MANUFACTURING		-	-
PRODUCTION	-	-	1217.
PROTOTYPE	1217.	-	167.
TOOL-TEST EQ	167.	-	1385.
SUBTOTAL (MFG)	1385.	-	
TOTAL COST	8557.	-	8557.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	19.430*	62.767*	ENGINEERING COMPLEXITY	1.000*
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.734*	7.658*	PROTO SCHEDULE FACTOR	0.250*
NEW PLANS LEVEL	0.500	0.500	ELECT VOL FRACTION	0.133
INTEGRATION LEVEL	0.000	0.000	PLATFORM	2.000
			YEAR OF TECHNOLOGY	1991*
			RELIABILITY FACTOR	1.0
			MTBF(FIELD)	41531*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93* (19)	SEP 94 (36)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00	PRODUCTION TOOLING	1.00*
AMORTIZED UNIT COST	0.00*		
DEV COST MULTIPLIER	1.00*		
PROD COST MULTIPLIER	1.00*		

SYSTEM COST SUMMARY

INPUT FILENAME: TOTAL8

23-AUG-90 12:45
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

TOTAL COST, WITH INTEGRATION COST

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	18241.	-	18241.
DESIGN	69807.	-	69807.
SYSTEMS	7323.	-	7323.
PROJ MGMT	12015.	-	12015.
DATA	3230.	-	3230.
SUBTOTAL (ENG)	110617.	-	110617.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	67036.	-	67036.
TOOL-TEST EQ	7975.	-	7975.
PURCH ITEMS	0.	-	0.
SUBTOTAL (MFG)	75011.	-	75011.
TOTAL COST	185628.	-	185628.

Enter selection : Y

PRICE H Model
(190172)

- 1 Specify Custom Global Data File
 - 2 Specify Custom Escalation Rate File
 - 3 Generate Output File
 - 4 Generate Lifecycle Data File
 - 5 Generate Postprocessor File
 - 6 Turn On COMMAND Prompts
 - 7 Display Schedule Penalty Report
 - 8 Select Output Report Format
- H Help
Q Exit Model
R Enter Data and Begin Processing

Enter selection : R

Enter Input Data Filename: TOTAL9
Enter Input Data Filename:

*Run 9: ETV, Prototypes, 2 Flight Units (Compare to Run 4)
Completion dates for 1st unit (ETV units) taken from Run 8
Last unit completion 1/31/95*

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:50
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

U MM

	UNIT WEIGHT	309.00	MODE	2
PROTOTYPE QUANTITY	4.600 UNIT VOLUME	172.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	791.	-	791.
DESIGN	3069.	-	3069.
SYSTEMS	463.	-	463.
PROJECT MGMT	842.	-	842.
DATA	223.	-	223.
SUBTOTAL (ENG)	5390.	-	5390.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3772.	-	3772.
TOOL-TEST EQ	340.	-	340.
SUBTOTAL (MFG)	4111.	-	4111.
TOTAL COST	9501.	-	9501.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	309.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.797*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	23462*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93 (22)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:50
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PC MM

	UNIT WEIGHT	100.00	MODE	1
PROTOTYPE QUANTITY	5.200 UNIT VOLUME	1.50	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	10.	-	10.
DESIGN	43.	-	43.
SYSTEMS	4.	-	4.
PROJECT MGMT	400.	-	400.
DATA	58.	-	58.
SUBTOTAL (ENG)	515.	-	515.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	5031.	-	5031.
TOOL-TEST EQ	644.	-	644.
SUBTOTAL (MFG)	5675.	-	5675.
TOTAL COST	6190.	-	6190.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	32.000*	68.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	45.333*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.057	7.810	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.050	0.050	ELECT VOL FRACTION	0.435*
DESIGN REPEAT	0.950	0.950	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	27948*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(12)	SEP 92	(28)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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23-AUG-90 13:50
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

HARNESS MM

PROTOTYPE QUANTITY	UNIT WEIGHT	35.00	MODE	1
	4.000 UNIT VOLUME	2.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	329.	-	329.
DESIGN	1313.	-	1313.
SYSTEMS	106.	-	106.
PROJECT MGMT	195.	-	195.
DATA	51.	-	51.
SUBTOTAL (ENG)	1994.	-	1994.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	745.	-	745.
TOOL-TEST EQ	96.	-	96.
SUBTOTAL (MFG)	841.	-	841.
TOTAL COST	2835.	-	2835.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	30.000	ENGINEERING COMPLEXITY	0.900
DENSITY	49.000	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
HW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.051*
SIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92 (25)	JAN 95 (40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192	TOOLING & PROCESS FACTORS	
ESCALATION	0.00	DEVELOPMENT TOOLING	1.00*
DEV COST MULTIPLIER	1.00*		

PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:50
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TERMAL MM

PROTOTYPE QUANTITY	UNIT WEIGHT	45.00	MODE	1
	4.600 UNIT VOLUME	1.50	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1054.	-	1054.
DESIGN	4262.	-	4262.
SYSTEMS	409.	-	409.
PROJECT MGMT	498.	-	498.
DATA	145.	-	145.
SUBTOTAL (ENG)	6368.	-	6368.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	971.	-	971.
TOOL-TEST EQ	126.	-	126.
SUBTOTAL (MFG)	1097.	-	1097.
TOTAL COST	7465.	-	7465.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	6.000*	39.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	26.000*	PROTOTYPE SUPPORT	1.0
PG. COMPLEXITY	9.800	7.200	PROTO SCHEDULE FACTOR	0.250*
N DESIGN	0.950	0.950	ELECT VOL FRACTION	0.091*
DESIGN REPEAT	0.000	0.300	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	133907*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93 (24)	JAN 95 (40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:50
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

H 1

	UNIT WEIGHT	421.00	MODE	2
PROTOTYPE QUANTITY	2.900 UNIT VOLUME	11.70	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	2049.	-	2049.
DESIGN	7523.	-	7523.
SYSTEMS	903.	-	903.
PROJECT MGMT	1147.	-	1147.
DATA	339.	-	339.
SUBTOTAL (ENG)	11960.	-	11960.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3029.	-	3029.
TOOL-TEST EQ	277.	-	277.
SUBTOTAL (MFG)	3307.	-	3307.
 TOTAL COST	 15267.	 -	 15267.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	421.000	ENGINEERING COMPLEXITY	1.000
DENSITY	35.983*	PROTOTYPE SUPPORT	1.0
W.G. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	21383*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93 (22)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:50
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

T MM

	UNIT WEIGHT	20.00	MODE	1
PROTOTYPE QUANTITY	5.700 UNIT VOLUME	3.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	31.	-	31.
DESIGN	93.	-	93.
SYSTEMS	2.	-	2.
PROJECT MGMT	269.	-	269.
DATA	42.	-	42.
SUBTOTAL(ENG)	436.	-	436.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3098.	-	3098.
TOOL-TEST EQ	220.	-	220.
SUBTOTAL(MFG)	3318.	-	3318.
TOTAL COST	3755.	-	3755.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.000*	4.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	1.333*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.119*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	65805*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(12)	SEP 92	(28)	JAN 95	(40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	191*
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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MECHANICAL ITEM

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23-AUG-90 13:50
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E 3S MM

	UNIT WEIGHT	127.00	MODE	2
PROTOTYPE QUANTITY	4.100	UNIT VOLUME	6.00	QUANTITY/NHA 1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	251.	-	251.
DESIGN	912.	-	912.
SYSTEMS	94.	-	94.
PROJECT MGMT	215.	-	215.
DATA	53.	-	53.
SUBTOTAL(ENG)	1524.	-	1524.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	883.	-	883.
TOOL-TEST EQ	70.	-	70.
SUBTOTAL(MFG)	953.	-	953.
TOTAL COST	2478.	-	2478.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	127.000	ENGINEERING COMPLEXITY	0.900
DENSITY	21.167*	PROTOTYPE SUPPORT	1.0
WG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.900	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	37694*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(13)	OCT 92	(27)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:50
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

MM LESS PM I&T

	UNIT WEIGHT	47.30	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	2.75	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING		-	622.
DRAFTING	622.	-	2550.
DESIGN	2550.	-	239.
SYSTEMS	239.	-	313.
PROJECT MGMT	313.	-	87.
DATA	87.	-	3812.
SUBTOTAL (ENG)	3812.	-	
MANUFACTURING		-	-
PRODUCTION	-	-	676.
PROTOTYPE	676.	-	91.
TOOL-TEST EQ	91.	-	766.
SUBTOTAL (MFG)	766.	-	
TOTAL COST	4578.	-	4578.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	6.034*	41.264*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
WG. COMPLEXITY	9.708	7.297	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.063*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	129634*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(14)	NOV 92	(26)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:51
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PM XP MOD MM

	UNIT WEIGHT	132.00	MODE	1
PROTOTYPE QUANTITY	4.300 UNIT VOLUME	14.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			266.
DRAFTING	266.	-	266.
DESIGN	1052.	-	1052.
SYSTEMS	102.	-	102.
PROJECT MGMT	713.	-	713.
DATA	133.	-	133.
SUBTOTAL (ENG)	2265.	-	2265.
MANUFACTURING			-
PRODUCTION	-	-	-
PROTOTYPE	10852.	-	10852.
TOOL-TEST EQ	1527.	-	1527.
SUBTOTAL (MFG)	12379.	-	12379.
TOTAL COST	14644.	-	14644.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	78.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	5.571*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.750	ELECT VOL FRACTION	0.088*
DESIGN REPEAT	0.900	0.900	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	19978*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(22)	JUL 93	(18)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:51
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PT MOD MM

	UNIT WEIGHT	268.00	MODE	1
PROTOTYPE QUANTITY	4.300 UNIT VOLUME	12.30	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING		-	3466.
DRAFTING	3466.	-	13480.
DESIGN	13480.	-	1344.
SYSTEMS	1344.	-	1855.
PROJECT MGMT	1855.	-	529.
DATA	529.	-	20674.
SUBTOTAL (ENG)	20674.	-	
MANUFACTURING		-	-
PRODUCTION	-	-	12308.
PROTOTYPE	12308.	-	1738.
TOOL-TEST EQ	1738.	-	14046.
SUBTOTAL (MFG)	14046.	-	
TOTAL COST	34720.	-	34720.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	214.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	17.398*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.600	0.900	ELECT VOL FRACTION	0.100*
DESIGN REPEAT	0.200	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	19978*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (24)	SEP 93 (16)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:51
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PRT MOD PRES VESSEL MM

	UNIT WEIGHT	105.00	MODE	2
PROTOTYPE QUANTITY	4.300 UNIT VOLUME	28.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	795.	-	795.
DESIGN	2968.	-	2968.
SYSTEMS	346.	-	346.
PROJECT MGMT	467.	-	467.
DATA	133.	-	133.
SUBTOTAL(ENG)	4709.	-	4709.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1260.	-	1260.
TOOL-TEST EQ	107.	-	107.
SUBTOTAL(MFG)	1368.	-	1368.
 TOTAL COST	 6076.	 -	 6076.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	105.000	ENGINEERING COMPLEXITY	1.000
VISITY	3.750*	PROTOTYPE SUPPORT	1.0
ENG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	32434*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(16)	JAN 93	(24)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:51
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

FM T&T

	UNIT WEIGHT	34.57	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	1.53	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	891.	-	891.
DESIGN	3607.	-	3607.
SYSTEMS	343.	-	343.
PROJECT MGMT	432.	-	432.
DATA	124.	-	124.
SUBTOTAL(ENG)	5397.	-	5397.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1166.	-	1166.
TOOL-TEST EQ	159.	-	159.
SUBTOTAL(MFG)	1325.	-	1325.
TOTAL COST	6723.	-	6723.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.620*	22.951*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
WG. COMPLEXITY	10.071	7.363	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.217*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	75715*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(17)	FEB 93	(23)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

PRICE HARDWARE MODEL
ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:51
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

M: &T W/PM

	UNIT WEIGHT	45.61	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	2.27	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	888.	-	888.
DESIGN	3576.	-	3576.
SYSTEMS	344.	-	344.
PROJECT MGMT	432.	-	432.
DATA	124.	-	124.
SUBTOTAL (ENG)	5363.	-	5363.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1124.	-	1124.
TOOL-TEST EQ	151.	-	151.
SUBTOTAL (MFG)	1276.	-	1276.
TOTAL COST	6639.	-	6639.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.574*	34.033*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.929	7.395	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.146*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	73009*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93 (23)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:52
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PICTURE DM

	UNIT WEIGHT	50.00	MODE	2
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	39.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	230.	-	230.
DESIGN	914.	-	914.
SYSTEMS	132.	-	132.
PROJECT MGMT	199.	-	199.
DATA	56.	-	56.
SUBTOTAL(ENG)	1531.	-	1531.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	522.	-	522.
TOOL-TEST EQ	51.	-	51.
SUBTOTAL(MFG)	573.	-	573.
TOTAL COST	2104.	-	2104.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	50.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.282*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	40520*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(15)	DEC 92	(25)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:52
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PC TR DM

	UNIT WEIGHT	210.00	MODE	1
PROTOTYPE QUANTITY	2.600 UNIT VOLUME	3.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	927.	-	927.
DESIGN	3654.	-	3654.
SYSTEMS	363.	-	363.
PROJECT MGMT	617.	-	617.
DATA	158.	-	158.
SUBTOTAL (ENG)	5719.	-	5719.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	4214.	-	4214.
TOOL-TEST EQ	576.	-	576.
SUBTOTAL (MFG)	4790.	-	4790.
TOTAL COST	10509.	-	10509.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	40.000*	170.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	56.667*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.057	7.954	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.200	ELECT VOL FRACTION	0.272*
DESIGN REPEAT	0.500	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	22458*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(20)	MAY 93	(20)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:52
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

HARNESS DM

PROTOTYPE QUANTITY	UNIT WEIGHT	50.00	MODE	1
	2.200 UNIT VOLUME	4.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	373.	-	373.
DESIGN	1487.	-	1487.
SYSTEMS	120.	-	120.
PROJECT MGMT	196.	-	196.
DATA	54.	-	54.
SUBTOTAL (ENG)	2230.	-	2230.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	493.	-	493.
TOOL-TEST EQ	70.	-	70.
SUBTOTAL (MFG)	563.	-	563.
TOTAL COST	2793.	-	2793.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	45.000	ENGINEERING COMPLEXITY	0.900
DENSITY	49.000	11.250*	PROTOTYPE SUPPORT	1.0
3. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
HW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.026*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92 (25)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:52
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

1 .MAL DM

	UNIT WEIGHT	10.00	MODE	2
PROTOTYPE QUANTITY	2.200 UNIT VOLUME	0.20	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	127.	-	127.
DESIGN	483.	-	483.
SYSTEMS	56.	-	56.
PROJECT MGMT	70.	-	70.
DATA	20.	-	20.
SUBTOTAL (ENG)	757.	-	757.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	59.	-	59.
TOOL-TEST EQ	7.	-	7.
SUBTOTAL (MFG)	66.	-	66.
TOTAL COST	823.	-	823.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	10.000	ENGINEERING COMPLEXITY	1.000
DENSITY	50.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	80800*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (11)	AUG 92 (29)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:52
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

TT DM

	UNIT WEIGHT	39.00	MODE	1
PROTOTYPE QUANTITY	4.900 UNIT VOLUME	2.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	42.	-	42.
DESIGN	126.	-	126.
SYSTEMS	2.	-	2.
PROJECT MGMT	339.	-	339.
DATA	54.	-	54.
SUBTOTAL (ENG)	564.	-	564.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3990.	-	3990.
TOOL-TEST EQ	285.	-	285.
SUBTOTAL (MFG)	4275.	-	4275.
TOTAL COST	4839.	-	4839.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	22.000*	17.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	8.500*	PROTOTYPE SUPPORT	1.0
S. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.244*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	48164*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (13)	OCT 92 (27)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:53
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

R 005 DM

	UNIT WEIGHT	150.00	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	6.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	16.	-	16.
DESIGN	44.	-	44.
SYSTEMS	1.	-	1.
PROJECT MGMT	96.	-	96.
DATA	16.	-	16.
SUBTOTAL(ENG)	173.	-	173.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	797.	-	797.
TOOL-TEST EQ	43.	-	43.
SUBTOTAL(MFG)	840.	-	840.
TOTAL COST	1013.	-	1013.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	145.000	ENGINEERING COMPLEXITY	0.200
DENSITY	42.000	24.167*	PROTOTYPE SUPPORT	1.0
3. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
HW DESIGN	0.050	0.200	ELECT VOL FRACTION	0.020*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	0.070	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	161130*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(8)	MAY 92	(32)	JAN 95	(40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:53
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

AM

	UNIT WEIGHT	50.00	MODE	1
PROTOTYPE QUANTITY	10.000 UNIT VOLUME	3.00	QUANTITY/NHA	3

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	197.	-	197.
DESIGN	711.	-	711.
SYSTEMS	33.	-	33.
PROJECT MGMT	238.	-	238.
DATA	49.	-	49.
SUBTOTAL (ENG)	1228.	-	1228.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1608.	-	1608.
TOOL-TEST EQ	151.	-	151.
SUBTOTAL (MFG)	1759.	-	1759.
TOTAL COST	2987.	-	2987.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	2.000*	48.000	ENGINEERING COMPLEXITY	0.600
DENSITY	49.000	16.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.800	0.200	ELECT VOL FRACTION	0.014*
DESIGN REPEAT	0.200	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.151	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	423050*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(12)	SEP 92	(28)	JAN 95	(40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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PRICE HARDWARE MODEL ELECTRONIC ITEM

INPUT FILENAME: TOTAL9
23-AUG-90 13:53
GLOBAL FILENAME:

(190172)
ESCALATION FILENAME:

D' ESS GNC I&T

	UNIT WEIGHT	48.43	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	2.28	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	943.	-	943.
DESIGN	3774.	-	3774.
SYSTEMS	369.	-	369.
PROJECT MGMT	460.	-	460.
DATA	133.	-	133.
SUBTOTAL(ENG)	5679.	-	5679.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1147.	-	1147.
TOOL-TEST EQ	150.	-	150.
SUBTOTAL(MFG)	1298.	-	1298.
TOTAL COST	6977.	-	6977.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	14.221*	34.208*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.743	7.422	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.178*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	56537*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93 (23)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:53
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

C CONTROL DM

	UNIT WEIGHT	98.00	MODE	1
PROTOTYPE QUANTITY	5.800 UNIT VOLUME	5.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	85.	-	85.
DESIGN	309.	-	309.
SYSTEMS	19.	-	19.
PROJECT MGMT	305.	-	305.
DATA	53.	-	53.
SUBTOTAL(ENG)	771.	-	771.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3587.	-	3587.
TOOL-TEST EQ	359.	-	359.
SUBTOTAL(MFG)	3946.	-	3946.
TOTAL COST	4717.	-	4717.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	30.000*	68.000	ENGINEERING COMPLEXITY	0.700
DENSITY	44.000	13.600*	PROTOTYPE SUPPORT	1.0
ENG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.150	ELECT VOL FRACTION	0.136*
DESIGN REPEAT	0.800	0.850	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.120	0.097	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	27834*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93 (24)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:53
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

E 3PS DM

	UNIT WEIGHT	10.00	MODE	1
PROTOTYPE QUANTITY	11.000 UNIT VOLUME	0.50	QUANTITY/NHA	4

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	154.	-	154.
DESIGN	571.	-	571.
SYSTEMS	34.	-	34.
PROJECT MGMT	201.	-	201.
DATA	41.	-	41.
SUBTOTAL(ENG)	1001.	-	1001.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1618.	-	1618.
TOOL-TEST EQ	157.	-	157.
SUBTOTAL(MFG)	1775.	-	1775.
 TOTAL COST	 2776.	 -	 2776.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	8.000*	2.000	ENGINEERING COMPLEXITY	0.700
DENSITY	40.000	4.000*	PROTOTYPE SUPPORT	1.0
DESIGN COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.950	ELECT VOL FRACTION	0.400*
DESIGN REPEAT	0.600	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	101657*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(14)	NOV 92	(26)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:53
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

G ANTENNA DM

PROTOTYPE QUANTITY	UNIT WEIGHT	1.00	MODE	1
	17.000 UNIT VOLUME	0.05	QUANTITY/NHA	7

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	5.	-	5.
DESIGN	16.	-	16.
SYSTEMS	0.	-	0.
PROJECT MGMT	22.	-	22.
DATA	4.	-	4.
SUBTOTAL (ENG)	48.	-	48.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	180.	-	180.
TOOL-TEST EQ	11.	-	11.
SUBTOTAL (MFG)	190.	-	190.
TOTAL COST	238.	-	238.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	0.500*	0.500	ENGINEERING COMPLEXITY	0.300
DENSITY	40.000	10.000*	PROTOTYPE SUPPORT	1.0
3. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
W DESIGN	0.300	0.300	ELECT VOL FRACTION	0.250*
DESIGN REPEAT	0.700	0.700	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	1538786*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (6)	MAR 92 (34)	JAN 95 (40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:54
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

GNC I&T

PROTOTYPE QUANTITY	UNIT WEIGHT	16.75	MODE	1
	6.000 UNIT VOLUME	0.37	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	606.	-	606.
DESIGN	2445.	-	2445.
SYSTEMS	238.	-	238.
PROJECT MGMT	333.	-	333.
DATA	90.	-	90.
SUBTOTAL (ENG)	3713.	-	3713.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	926.	-	926.
TOOL-TEST EQ	106.	-	106.
SUBTOTAL (MFG)	1031.	-	1031.
TOTAL COST	4744.	-	4744.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.194*	5.553*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
CFG. COMPLEXITY	9.256	6.853	PROTO SCHEDULE FACTOR	0.250*
HW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.864*
SIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	61724*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (14)	NOV 92 (26)	JAN 95 (40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

INPUT FILENAME: TOTAL9

23-AUG-90 13:54
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

STRUCTURE, PROPULSION SUBMOD.

✓ ROTOTYPE QUANTITY	UNIT WEIGHT	150.00	MODE	2
	3.000 UNIT VOLUME	38.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	464.	-	464.
DESIGN	1831.	-	1831.
SYSTEMS	269.	-	269.
PROJECT MGMT	428.	-	428.
DATA	118.	-	118.
SUBTOTAL (ENG)	3110.	-	3110.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1373.	-	1373.
TOOL-TEST EQ	135.	-	135.
SUBTOTAL (MFG)	1508.	-	1508.
TOTAL COST	4618.	-	4618.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	150.000	ENGINEERING COMPLEXITY	1.200
DENSITY	3.947*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
FW DESIGN	0.900	PLATFORM	2.000
SIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	29143*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91	JAN 93	JAN 95
	(16)	(24)	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

PRICE - HARDWARE MODEL
MECHANICAL ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:54
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PER PULSION DM

	UNIT WEIGHT	141.00	MODE	2
PROTOTYPE QUANTITY	2.300 UNIT VOLUME	10.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	104.	-	104.
DESIGN	398.	-	398.
SYSTEMS	42.	-	42.
PROJECT MGMT	492.	-	492.
DATA	90.	-	90.
SUBTOTAL (ENG)	1126.	-	1126.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	8190.	-	8190.
TOOL-TEST EQ	1062.	-	1062.
SUBTOTAL (MFG)	9252.	-	9252.
TOTAL COST	10378.	-	10378.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	141.000	ENGINEERING COMPLEXITY	1.000
DENSITY	14.100*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	9.669	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	PLATFORM	2.000
DESIGN REPEAT	0.800	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	14219*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(24)	SEP 93	(16)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:54
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PC JLSION SUBMOD. I&T

	UNIT WEIGHT	17.78	MODE	2
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	1.19	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	178.	-	178.
DESIGN	694.	-	694.
SYSTEMS	73.	-	73.
PROJECT MGMT	110.	-	110.
DATA	29.	-	29.
SUBTOTAL (ENG)	1084.	-	1084.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	386.	-	386.
TOOL-TEST EQ	41.	-	41.
SUBTOTAL (MFG)	427.	-	427.
 TOTAL COST	 1511.	 -	 1511.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	17.784*	ENGINEERING COMPLEXITY	1.000
DENSITY	15.000*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	8.436	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	40944*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(15)	DEC 92	(25)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:54
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

D 2T

	UNIT WEIGHT	47.07	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	2.05	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1004.	-	1004.
DESIGN	4020.	-	4020.
SYSTEMS	394.	-	394.
PROJECT MGMT	503.	-	503.
DATA	143.	-	143.
SUBTOTAL(ENG)	6064.	-	6064.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1221.	-	1221.
TOOL-TEST EQ	154.	-	154.
SUBTOTAL(MFG)	1376.	-	1376.
TOTAL COST	7440.	-	7440.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.283*	30.791*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
DESIGN COMPLEXITY	9.546	7.938	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.227*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	46698*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93 (24)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL9

23-AUG-90 13:55
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

P LOAD ADAPTER

	UNIT WEIGHT	1000.00	MODE	1
PROTOTYPE QUANTITY	6.800 UNIT VOLUME	249.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	597.	-	597.
DESIGN	2107.	-	2107.
SYSTEMS	102.	-	102.
PROJECT MGMT	1221.	-	1221.
DATA	229.	-	229.
SUBTOTAL (ENG)	4256.	-	4256.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	11946.	-	11946.
TOOL-TEST EQ	1105.	-	1105.
SUBTOTAL (MFG)	13050.	-	13050.
TOTAL COST	17307.	-	17307.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	995.000	ENGINEERING COMPLEXITY	0.600
DENSITY	42.000	3.996*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.200	ELECT VOL FRACTION	0.000*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.134	0.263	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92 (25)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
INTEGRATION AND TEST

INPUT FILENAME: TOTAL9

23-AUG-90 13:55
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

IL SYSTEM I&T

	INT WEIGHT	82.197*	MODE	5
PROTOTYPE QUANTITY	3.000 INT VOLUME	4.184*	QUANTITY/HNA	0

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1251.	-	1251.
DESIGN	5002.	-	5002.
SYSTEMS	489.	-	489.
PROJECT MGMT	624.	-	624.
DATA	178.	-	178.
SUBTOTAL (ENG)	7544.	-	7544.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1720.	-	1720.
TOOL-TEST EQ	222.	-	222.
SUBTOTAL (MFG)	1942.	-	1942.
TOTAL COST	9486.	-	9486.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	19.430*	62.767*	ENGINEERING COMPLEXITY	1.000*
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.734*	7.658*	PROTO SCHEDULE FACTOR	0.250*
NEW PLANS LEVEL	0.500	0.500	ELECT VOL FRACTION	0.133
INTEGRATION LEVEL	0.000	0.000	PLATFORM	2.000
			YEAR OF TECHNOLOGY	1991*
			RELIABILITY FACTOR	1.0
			MTBF (FIELD)	41531*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93 (23)	JAN 95 (40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
AMORTIZED UNIT COST	0.00*
DEV COST MULTIPLIER	1.00*
PROD COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
PRODUCTION TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
SYSTEM COST SUMMARY

UT FILENAME: TOTAL9

23-AUG-90 13:55
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TOTAL COST, WITH INTEGRATION COST

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	18748.	-	18748.
DESIGN	73035.	-	73035.
SYSTEMS	7437.	-	7437.
PROJ MGMT	14231.	-	14231.
DATA	3556.	-	3556.
SUBTOTAL (ENG)	117006.	-	117006.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	88891.	-	88891.
TOOL-TEST EQ	10233.	-	10233.
PURCH ITEMS	0.	-	0.
SUBTOTAL (MFG)	99124.	-	99124.
TOTAL COST	216130.	-	216130.

Restart the Program (Y/N)? N

Enter selection : 1

Processing ... Please wait

PRICE H Model
(190172)

- 1 Specify Custom Global Data File
 - 2 Specify Custom Escalation Rate File
 - 3 Generate Output File
 - 4 Generate Lifecycle Data File
 - 5 Generate Postprocessor File
 - 6 Turn On COMMAND Prompts
 - 7 Display Schedule Penalty Report
 - 8 Select Output Report Format
- H Help
Q Exit Model
R Enter Data and Begin Processing

Enter selection : R

Enter Input Data Filename: TOTAL10
Enter Input Data Filename:

*Run 10: Same as Run 9, but adds spaces (Compare to Run #6)
Same dates as Run 9*

MECHANICAL ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:27
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

37 U MM

	UNIT WEIGHT	309.00	MODE	2
PROTOTYPE QUANTITY	4.600 UNIT VOLUME	172.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	791.	-	791.
DESIGN	3069.	-	3069.
SYSTEMS	463.	-	463.
PROJECT MGMT	842.	-	842.
DATA	223.	-	223.
SUBTOTAL (ENG)	5390.	-	5390.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	3772.	-	3772.
TOOL-TEST EQ	340.	-	340.
SUBTOTAL (MFG)	4111.	-	4111.
TOTAL COST	9501.	-	9501.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	309.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.797*	PROTOTYPE SUPPORT	1.0
G. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	23462*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93 (22)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:27
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

POWER MM

	UNIT WEIGHT	100.00	MODE	1
PROTOTYPE QUANTITY	6.200 UNIT VOLUME	1.50	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	10.	-	10.
DESIGN	43.	-	43.
SYSTEMS	4.	-	4.
PROJECT MGMT	465.	-	465.
DATA	67.	-	67.
SUBTOTAL (ENG)	589.	-	589.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	5864.	-	5864.
TOOL-TEST EQ	741.	-	741.
SUBTOTAL (MFG)	6605.	-	6605.
TOTAL COST	7194.	-	7194.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	32.000*	68.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	45.333*	PROTOTYPE SUPPORT	1.0
FG. COMPLEXITY	10.057	7.810	PROTO SCHEDULE FACTOR	0.250*
W DESIGN	0.050	0.050	ELECT VOL FRACTION	0.435*
DESIGN REPEAT	0.950	0.950	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	27948*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(12)	SEP 92	(28)	JAN 95	(40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:27
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

HARNES MM

UT))UH 35.00 MODE *d*
 PROTOTYPE QUANTITY 1
 5.000 UNIT VOLUME 2.00 QUANTITY/NHA 1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	329.	-	329.
DESIGN	1313.	-	1313.
SYSTEMS	106.	-	106.
PROJECT MGMT	207.	-	207.
DATA	53.	-	53.
SUBTOTAL (ENG)	2008.	-	2008.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	903.	-	903.
TOOL-TEST EQ	114.	-	114.
SUBTOTAL (MFG)	1017.	-	1017.
TOTAL COST	3025.	-	3025.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	30.000	ENGINEERING COMPLEXITY	0.900
DENSITY	49.000	15.000*	PROTOTYPE SUPPORT	1.0
CFG. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.051*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92 (25)	JAN 95 (40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

UT FILENAME: TOTAL10

23-AUG-90 14:27
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

THERMAL MM

PROTOTYPE QUANTITY	UNIT WEIGHT	45.00	MODE	1
	5.600 UNIT VOLUME	1.50	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1054.	-	1054.
DESIGN	4262.	-	4262.
SYSTEMS	409.	-	409.
PROJECT MGMT	511.	-	511.
DATA	147.	-	147.
SUBTOTAL (ENG)	6383.	-	6383.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1152.	-	1152.
TOOL-TEST EQ	146.	-	146.
SUBTOTAL (MFG)	1298.	-	1298.
TOTAL COST	7681.	-	7681.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	6.000*	39.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	26.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.800	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.950	ELECT VOL FRACTION	0.091*
DESIGN REPEAT	0.000	0.300	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	133907*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93 (24)	JAN 95 (40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:27
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

MM

PROTOTYPE QUANTITY	UNIT WEIGHT	421.00	MODE	2
	4.900 UNIT VOLUME	11.70	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	2049.	-	2049.
DESIGN	7523.	-	7523.
SYSTEMS	903.	-	903.
PROJECT MGMT	1282.	-	1282.
DATA	360.	-	360.
(\$ MANUFACTURING)	12118.	-	12118.
PRODUCTION	-	-	-
PROTOTYPE	4795.	-	4795.
TOOL-TEST EQ	405.	-	405.
SUBTOTAL(MFG)	5201.	-	5201.
 TOTAL COST	 17318.	 -	 17318.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	421.000	ENGINEERING COMPLEXITY	1.000
DENSITY	35.983*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
FW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	21383*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93 (22)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:28
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

TTC MM

	UNIT WEIGHT	20.00	MODE	1
PROTOTYPE QUANTITY	7.700 UNIT VOLUME	3.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	31.	-	31.
DESIGN	93.	-	93.
SYSTEMS	2.	-	2.
PROJECT MGMT	342.	-	342.
DATA	52.	-	52.
SUBTOTAL (ENG)	521.	-	521.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	4026.	-	4026.
TOOL-TEST EQ	283.	-	283.
SUBTOTAL (MFG)	4309.	-	4309.
TOTAL COST	4830.	-	4830.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.000*	4.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	1.333*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
HW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.119*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	65805*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(12)	SEP 92	(28)	JAN 95	(40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	191*
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL10 23-AUG-90 14:28 GLOBAL FILENAME:
(190172) ESCALATION FILENAME:

ECLSS MM

	UNIT WEIGHT	127.00	MODE	2
PROTOTYPE QUANTITY	5.100 UNIT VOLUME	6.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	251.	-	251.
DESIGN	912.	-	912.
SYSTEMS	94.	-	94.
PROJECT MGMT	232.	-	232.
DATA	55.	-	55.
SUBTOTAL (ENG)	1545.	-	1545.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1071.	-	1071.
TOOL-TEST EQ	81.	-	81.
SUBTOTAL (MFG)	1153.	-	1153.
TOTAL COST	2697.	-	2697.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	127.000	ENGINEERING COMPLEXITY	0.900
DENSITY	21.167*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.900	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	37694*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (13)	OCT 92 (27)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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R R R)MdhHH ELECTRONIC ITEM

INPUT FILENAME: TOTAL10 23-AUG-90 14:28 GLOBAL FILENAME:
(190172) ESCALATION FILENAME:

MM LESS PM I&T

	UNIT WEIGHT	47.30	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	2.75	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	622.	-	622.
DESIGN	2550.	-	2550.
SYSTEMS	239.	-	239.
PROJECT MGMT	313.	-	313.
DATA	87.	-	87.
SUBTOTAL (ENG)	3812.	-	3812.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	676.	-	676.
TOOL-TEST EQ	91.	-	91.
SUBTOTAL (MFG)	766.	-	766.

INPUT FILENAME: TOTAL10

23-AUG-90 14:28
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

PM EXP MOD NM

	UNIT WEIGHT	132.00	MODE	1
PROTOTYPE QUANTITY	5.300 UNIT VOLUME	14.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	266.	-	266.
DESIGN	1052.	-	1052.
SYSTEMS	102.	-	102.
PROJECT MGMT	834.	-	834.
DATA	153.	-	153.
SUBTOTAL(ENG)	2407.	-	2407.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	12997.	-	12997.
TOOL-TEST EQ	1809.	-	1809.
SUBTOTAL(MFG)	14807.	-	14807.
TOTAL COST	17213.	-	17213.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	78.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	5.571*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.750	ELECT VOL FRACTION	0.088*
DESIGN REPEAT	0.900	0.900	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	19978*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (22)	JUL 93 (18)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:28
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

SPT MOD MM

PROTOTYPE QUANTITY	5.300	UNIT WEIGHT	268.00	MODE	1
		UNIT VOLUME	12.30	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	3466.	-	3466.
DESIGN	13480.	-	13480.
SYSTEMS	1344.	-	1344.
PROJECT MGMT	1984.	-	1984.
DATA	551.	-	551.
SUBTOTAL (ENG)	20825.	-	20825.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	14742.	-	14742.
TOOL-TEST EQ	2058.	-	2058.
SUBTOTAL (MFG)	16800.	-	16800.
TOTAL COST	37626.	-	37626.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	214.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	17.398*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.600	0.900	ELECT VOL FRACTION	0.100*
DESIGN REPEAT	0.200	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	19978*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (24)	SEP 93 (16)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS
ECONOMIC BASE	192	DEVELOPMENT TOOLING
ESCALATION	0.00	
DEV COST MULTIPLIER	1.00*	

INPUT FILENAME: TOTAL10

23-AUG-90 14:28
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PM SPT MOD PRES VESSEL MM

PROTOTYPE QUANTITY	UNIT WEIGHT	105.00	MODE	2
	5.300 UNIT VOLUME	28.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	795.	-	795.
DESIGN	2968.	-	2968.
SYSTEMS	346.	-	346.
PROJECT MGMT	488.	-	488.
DATA	136.	-	136.
SUBTOTAL (ENG)	4733.	-	4733.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1515.	-	1515.
TOOL-TEST EQ	126.	-	126.
SUBTOTAL (MFG)	1641.	-	1641.
TOTAL COST	6374.	-	6374.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	105.000	ENGINEERING COMPLEXITY	1.000
DENSITY	3.750*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	32434*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(16)	JAN 93	(24)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

INPUT FILENAME: TOTAL10

23-AUG-90 14:29
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PM I&T

	UNIT WEIGHT	34.57	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	1.53	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	891.	-	891.
DESIGN	3607.	-	3607.
SYSTEMS	343.	-	343.
PROJECT MGMT	432.	-	432.
DATA	124.	-	124.
SUBTOTAL (ENG)	5397.	-	5397.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1166.	-	1166.
TOOL-TEST EQ	159.	-	159.
SUBTOTAL (MFG)	1325.	-	1325.
TOTAL COST	6723.	-	6723.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.620*	22.951*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.071	7.363	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.217*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	75715*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(17)	FEB 93	(23)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

INPUT FILENAME: TOTAL10

23-AUG-90 14:29
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

MM I&T W/PM

PROTOTYPE QUANTITY	UNIT WEIGHT	45.61	MODE	1
	3.000 UNIT VOLUME	2.27	QUANTITY/NHA	1

PROGRAM COST(\$ 1000) EjP)*T*ij\$D	DEVELOPMENT	PRODUCTION	TOTAL COST
\$\$ H)"IFTK&"!	888.	-	888.
DESIGN	3576.	-	3576.
SYSTEMS	344.	-	344.
PROJECT MGMT	432.	-	432.
DATA	124.	-	124.
SUBTOTAL (ENG)	5363.	-	5363.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1124.	-	1124.
TOOL-TEST EQ	151.	-	151.
SUBTOTAL (MFG)	1276.	-	1276.
TOTAL COST	6639.	-	6639.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS
WEIGHT	11.574*	34.033*	ENGINEERING COMPLEXITY 1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT 1.0
MFG. COMPLEXITY	9.929	7.395	PROTO SCHEDULE FACTOR 0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION 0.146*
DESIGN REPEAT	0.000	0.000	PLATFORMrjIR2)UiuJ9Q9bUeU

%	\$\$HH	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR 1.0
			MTBF(FIELD) 73009*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93 (23)	JAN 95 (40)

SUPPLEMENTAL INFORMATION	TOOLING & PROCESS FACTORS
ECONOMIC BASE 192	DEVELOPMENT TOOLING 1.00*
ESCALATION 0.00	
DEV COST MULTIPLIER 1.00*	

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:29
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

STRUCTURE DM

	UNIT WEIGHT	50.00	MODE	2
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	39.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	230.	-	230.
DESIGN	914.	-	914.
SYSTEMS	132.	-	132.
PROJECT MGMT	199.	-	199.
DATA	56.	-	56.
SUBTOTAL (ENG)	1531.	-	1531.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	522.	-	522.
TOOL-TEST EQ	51.	-	51.
SUBTOTAL (MFG)	573.	-	573.
TOTAL COST	2104.	-	2104.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	50.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.282*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	40520*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(15)	DEC 92	(25)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

INPUT FILENAME: TOTAL10

23-AUG-90 14:29
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

POWER DM

	UNIT WEIGHT	210.00	MODE	1
PROTOTYPE QUANTITY	3.600 UNIT VOLUME	3.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	927.	-	927.
DESIGN	3654.	-	3654.
SYSTEMS	363.	-	363.
PROJECT MGMT	701.	-	701.
DATA	172.	-	172.
SUBTOTAL (ENG)	5816.	-	5816.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	5567.	-	5567.
TOOL-TEST EQ	733.	-	733.
SUBTOTAL (MFG)	6301.	-	6301.
TOTAL COST	12117.	-	12117.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	40.000*	170.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	56.667*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.954	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.200	ELECT VOL FRACTION	0.272*
DESIGN REPEAT	0.500	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	22458*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (20)	MAY 93 (20)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:29
(190172)GLOBAL FILENAME:
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HARNESS DM

	UNIT WEIGHT	50.00	MODE	1
PROTOTYPE QUANTITY	3.200	UNIT VOLUME	4.00	QUANTITY/NHA 1

PROGRAM COST (\$ 1000)	DEVEL		
T (
dHHHPRODUCTION	TOTAL COST		
ENGINEERING			
DRAFTING	373.	-	373.
DESIGN	1487.	-	1487.
SYSTEMS	120.	-	120.
PROJECT MGMT	209.	-	209.
DATA	56.	-	56.
SUBTOTAL (ENG)	2246.	-	2246.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	678.	-	678.
TOOL-TEST EQ	90.	-	90.
SUBTOTAL (MFG)	768.	-	768.
TOTAL COST	3014.	-	3014.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	45.000	ENGINEERING COMPLEXITY	0.900
DENSITY	49.000	11.250*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.026*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92 (25)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS
ECONOMIC BASE	192	DEVELOPMENT TOOLING
ESCALATION	0.00	1.00*
DEV COST MULTIPLIER	1.00*	

INPUT FILENAME: TOTAL10

23-AUG-90 14:30
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

THERMAL DM

PROTOTYPE QUANTITY	UNIT WEIGHT 2.100	UNIT VOLUME	10.00	MODE	2
			0.20	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	127.	-	127.
DESIGN	483.	-	483.
SYSTEMS	56.	-	56.
PROJECT MGMT	70.	-	70.
DATA	20.	-	20.
SUBTOTAL (ENG)	757.	-	757.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	56.	-	56.
TOOL-TEST EQ	7.	-	7.
SUBTOTAL (MFG)	63.	-	63.
TOTAL COST	820.	-	820.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	10.000	ENGINEERING COMPLEXITY	1.000
DENSITY	50.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	80800*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(11)	AUG 92	(29)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:30
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

TTC DM

PROTOTYPE QUANTITY	UNIT WEIGHT	39.00	MODE	1
	6.900 UNIT VOLUME	2.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	42.	-	42.
DESIGN	126.	-	126.
SYSTEMS	2.	-	2.
PROJECT MGMT	446.	-	446.
DATA	69.	-	69.
SUBTOTAL (ENG)	686.	-	686.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	5370.	-	5370.
TOOL-TEST EQ	379.	-	379.
SUBTOTAL (MFG)	5749.	-	5749.
TOTAL COST	6435.	-	6435.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	22.000*	17.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	8.500*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.244*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	48164*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(13)	OCT 92	(27)	JAN 95	(40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192	TOOLING & PROCESS FACTORS	
ESCALATION	0.00	DEVELOPMENT TOOLING	1.00*
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:30
(190172)

GLOBAL FILENAME:
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R SYS DM

PROTOTYPE QUANTITY	UNIT WEIGHT	150.00	MODE	1
	5.000 UNIT VOLUME	6.00	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	16.	-	16.
DESIGN	44.	-	44.
SYSTEMS	1.	-	1.
PROJECT MGMT	142.	-	142.
DATA	22.	-	22.
SUBTOTAL (ENG)	225.	-	225.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1249.	-	1249.
TOOL-TEST EQ	63.	-	63.
SUBTOTAL (MFG)	1312.	-	1312.
TOTAL COST	1537.	-	1537.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	145.000	ENGINEERING COMPLEXITY	0.200
DENSITY	42.000	24.167*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.050	0.200	ELECT VOL FRACTION	0.020*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	161130*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(8)	MAY 92	(32)	JAN 95	(40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192	TOOLING & PROCESS FACTORS	
ESCALATION	0.00	DEVELOPMENT TOOLING	1.00*
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:30
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

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	UNIT WEIGHT	50.00	MODE	1
PROTOTYPE QUANTITY	13.000 UNIT VOLUME	3.00	QUANTITY/NHA	3

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	197.	-	197.
DESIGN	711.	-	711.
SYSTEMS	33. jrjIR2\$\$\$HT)J*j*jT		
\$\$\$HH 273.	-	273.	
DATA	54.	-	54.
SUBTOTAL (ENG)	1269.	-	1269.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2035.	-	2035.
TOOL-TEST EQ	189.	-	189.
SUBTOTAL (MFG)	2224.	-	2224.
TOTAL COST	3493.	-	3493.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	2.000*	48.000	ENGINEERING COMPLEXITY	0.600
DENSITY	49.000	16.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.800	0.200	ELECT VOL FRACTION	0.014*
DESIGN REPEAT	0.200	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.151	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	423050*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92 (28)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:30
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

DM LESS GNC I&T

PROTOTYPE QUANTITY	UNIT WEIGHT	48.43	MODE	1
	3.000 UNIT VOLUME	2.28	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	943.	-	943.
DESIGN	3774.	-	3774.
SYSTEMS	369.	-	369.
PROJECT MGMT	460.	-	460.
DATA	133.	-	133.
SUBTOTAL (ENG)	5679.	-	5679.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1147.	-	1147.
TOOL-TEST EQ	150.	-	150.
SUBTOTAL (MFG)	1298.	-	1298.
TOTAL COST	6977.	-	6977.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	14.221*	34.208*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.743	7.422	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.178*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	56537*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93 (23)	JAN 95 (40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:31
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

GNC CONTROL DM

	UNIT WEIGHT	98.00	MODE	1
PROTOTYPE QUANTITY	7.800 UNIT VOLUME	5.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	85.	-	85.
DESIGN	309.	-	309.
SYSTEMS	19.	-	19.
PROJECT MGMT	383.	-	383.
DATA	64.	-	64.
SUBTOTAL(ENG)	860.	-	860.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	4650.	-	4650.
TOOL-TEST EQ	457.	-	457.
SUBTOTAL(MFG)	5107.	-	5107.
TOTAL COST	5967.	-	5967.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	30.000*	68.000	ENGINEERING COMPLEXITY	0.700
DENSITY	44.000	13.600*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.150	ELECT VOL FRACTION	0.136*
DESIGN REPEAT	0.800	0.850	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.120	0.097	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	27834*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(16)	JAN 93	(24)	JAN 95	(40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:31
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

GNC GPS DM

	UNIT WEIGHT	10.00	MODE	1
PROTOTYPE QUANTITY	15.000 UNIT VOLUME	0.50	QUANTITY/NHA	4

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	154.	-	154.
DESIGN	571.	-	571.
SYSTEMS	34.	-	34.
PROJECT MGMT	241.	-	241.
DATA	47.	-	47.
SUBTOTAL (ENG)	1047.	-	1047.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2133.	-	2133.
TOOL-TEST EQ	204.	-	204.
SUBTOTAL (MFG)	2337.	-	2337.
TOTAL COST	3384.	-	3384.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	8.000*	2.000	ENGINEERING COMPLEXITY	0.700
DENSITY	40.000	4.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.950	ELECT VOL FRACTION	0.400*
DESIGN REPEAT	0.600	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	101657*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(14)	NOV 92	(26)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:31
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

GNC ANTENNA DM

	UNIT WEIGHT	1.00	MODE	1
PROTOTYPE QUANTITY	24.000 UNIT VOLUME	0.05	QUANTITY/NHA	7

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	5.	-	5.
DESIGN	16.	-	16.
SYSTEMS	0.	-	0.
PROJECT MGMT	29.	-	29.
DATA	4.	-	4.
SUBTOTAL (ENG)	55.	-	55.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	245.	-	245.
TOOL-TEST EQ	15.	-	15.
SUBTOTAL (MFG)	259.	-	259.
TOTAL COST	315.	-	315.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	0.500*	0.500	ENGINEERING COMPLEXITY	0.300
DENSITY	40.000	10.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.300	0.300	ELECT VOL FRACTION	0.250*
DESIGN REPEAT	0.700	0.700	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	1538786*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(6)	MAR 92	(34)	JAN 95	(40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
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ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:31
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

GNC I&T

UNIT WEIGHT	16.75	MODE	1
6.000 UNIT VOLUME	0.37	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	606.	-	606.
DESIGN	2445.	-	2445.
SYSTEMS	238.	-	238.
PROJECT MGMT	333.	-	333.
DATA	90.	-	90.
SUBTOTAL (ENG)	3713.	-	3713.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	926.	-	926.
TOOL-TEST EQ	106.	-	106.
SUBTOTAL (MFG)	1031.	-	1031.
TOTAL COST	4744.	-	4744.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.194*	5.553*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.256	6.853	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.864*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	61724*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (14)	NOV 92 (26)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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OF PROJECT

MECHANICAL ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:31
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

STRUCTURE, PROPULSION SUBMOD.

UNIT WEIGHT	150.00	MODE	2
PROTOTYPE QUANTITY	3.000	UNIT VOLUME	38.00
		QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	464.	-	464.
DESIGN	1831.	-	1831.
SYSTEMS	269.	-	269.
PROJECT MGMT	428.	-	428.
DATA			

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MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1373.	-	1373.
TOOL-TEST EQ	135.	-	135.
SUBTOTAL (MFG)	1508.	-	1508.
TOTAL COST	4618.	-	4618.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	150.000	ENGINEERING COMPLEXITY	1.200
DENSITY	3.947*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.900	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	29143*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93 (24)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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INPUT FILENAME: TOTAL10

23-AUG-90 14:32
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PROPULSION DM

	UNIT WEIGHT	141.00	MODE	2
PROTOTYPE QUANTITY	2.300 UNIT VOLUME	10.00	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	104.	-	104.
DESIGN	398.	-	398.
SYSTEMS	42.	-	42.
PROJECT MGMT	492.	-	492.
DATA	90.	-	90.
SUBTOTAL (ENG)	1126.	-	1126.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	8190.	-	8190.
TOOL-TEST EQ	1062.	-	1062.
SUBTOTAL (MFG)	9252.	-	9252.
TOTAL COST	10378. j		

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PRODUCT DESCRIPTORS

WEIGHT	141.000	ENGINEERING COMPLEXITY	1.000
DENSITY	14.100*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.669	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	PLATFORM	2.000
DESIGN REPEAT	0.800	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	14219*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (24)	SEP 93 (16)	JAN 95 (40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192	TOOLING & PROCESS FACTORS	
ESCALATION	0.00	DEVELOPMENT TOOLING	1.00*
DEV COST MULTIPLIER	1.00*		

MECHANICAL ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:32
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PROPULSION SUBMOD. I&T

PROTOTYPE QUANTITY	UNIT WEIGHT	17.78	MODE	2
	3.000 UNIT VOLUME	1.19	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	178.	-	178.
DESIGN	694.	-	694.
SYSTEMS	73.	-	73.
PROJECT MGMT	110.	-	110.
DATA	29.	-	29.
SUBTOTAL (ENG)	1084.	-	1084.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	386.	-	386.
TOOL-TEST EQ	41.	-	41.
SUBTOTAL (MFG)	427.	-	427.
TOTAL COST	1511.	-	1511.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	17.784*	ENGINEERING COMPLEXITY	1.000
DENSITY	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	8.436	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	40944*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(15)	DEC 92	(25)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:32
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

DM I&T

	UNIT WEIGHT	47.07	MODE	1
PROTOTYPE QUANTITY	3.000 UNIT VOLUME	2.05	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1004.	-	1004.
DESIGN	4020.	-	4020.
SYSTEMS	394.	-	394.
PROJECT MGMT	503.	-	503.
DATA	143.	-	143.
SUBTOTAL (ENG)	6064.	-	6064.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1221.	-	1221.
TOOL-TEST EQ	154.	-	154.
SUBTOTAL (MFG)	1376.	-	1376.
TOTAL COST	7440.	-	7440.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.283*	30.791*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.546	7.938	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.227*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	46698*

SCHEDULE	START		FIRST ITEM	FINISH	
DEVELOPMENT	OCT 91	(16)	JAN 93	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS
ECONOMIC BASE	192	DEVELOPMENT TOOLING
ESCALATION	0.00	
DEV COST MULTIPLIER	1.00*	

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ELECTRONIC ITEM

INPUT FILENAME: TOTAL10

23-AUG-90 14:32
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PAYLOAD ADAPTER

	UNIT WEIGHT	1000.00	MODE	1
PROTOTYPE QUANTITY	7.800 UNIT VOLUME	249.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	597.	-	597.
DESIGN	2107.	-	2107.
SYSTEMS	102.	-	102.
PROJECT MGMT	1340.	-	1340.
DATA	247.	-	247.
SUBTOTAL (ENG)	4393.	-	4393.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	13497.	-	13497.
TOOL-TEST EQ	1241.	-	1241.
SUBTOTAL (MFG)	14738.	-	14738.
TOTAL COST	19130.	-	19130.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	995.000	ENGINEERING COMPLEXITY	0.600
DENSITY	42.000	3.996*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.200	ELECT VOL FRACTION	0.000*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.134	0.263	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92 (25)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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INPUT FILENAME: TOTAL10

23-AUG-90 14:32
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TOTAL SYSTEM I&T

PROTOTYPE QUANTITY	INT WEIGHT 3.000 INT VOLUME	82.197* MODE 4.184* QUANTITY/HNA	5 0
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PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1251.	-	1251.
DESIGN	5002.	-	5002.
SYSTEMS	489.	-	489.
PROJECT MGMT	624.	-	624.
DATA	178.	-	178.
SUBTOTAL (ENG)	7544.	-	7544.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1720.	-	1720.
TOOL-TEST EQ	222.	-	222.
SUBTOTAL (MFG)	1942.	-	1942.
TOTAL COST	9486.	-	9486.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	19.430*	62.767*	ENGINEERING COMPLEXITY	1.000*
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.734*	7.658*	PROTO SCHEDULE FACTOR	0.250*
NEW PLANS LEVEL	0.500	0.500	ELECT VOL FRACTION	0.133
INTEGRATION LEVEL	0.000	0.000	PLATFORM	2.000
			YEAR OF TECHNOLOGY	1991*
			RELIABILITY FACTOR	1.0
			MTBF (FIELD)	41531*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93 (23)	JAN 95 (40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
AMORTIZED UNIT COST	0.00*
DEV COST MULTIPLIER	1.00*
PROD COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*
PRODUCTION TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
SYSTEM COST SUMMARY

INPUT FILENAME: TOTAL10

23-AUG-90 14:33
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

TOTAL COST, WITH INTEGRATION COST

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	18748.	-	18748.
DESIGN	73035.	-	73035.
SYSTEMS	7437.	-	7437.
PROJ MGMT	15347.	-	15347.
DATA	3728.	-	3728.
SUBTOTAL (ENG)	118294.	-	118294.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	104770.	-	104770.
TOOL-TEST EQ	11805.	-	11805.
PURCH ITEMS	0.	-	0.
SUBTOTAL (MFG)	116575.	-	116575.
TOTAL COST	234868.	-	234868.

Restart the Program (Y/N)? Y

PRICE H Model
(190172)

- 1 Specify Custom Global Data File
 - 2 Specify Custom Escalation Rate File
 - 3 Generate Output File
 - 4 Generate Lifecycle Data File
 - 5 Generate Postprocessor File
 - 6 Turn On COMMAND Prompts
 - 7 Display Schedule Penalty Report
 - 8 Select Output Report Format
- H Help
Q Exit Model
R Enter Data and Begin Processing

Enter selection : R

Enter Input Data Filename: TOTAL11
Enter Input Data Filename:

*Run 11: Same as Run 10, but added 2 more flt. units (Compare to Run 7)
Same dates as Run 10 (the plan was to let the end date be
calculated by the model, but that was not done)*

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MECHANICAL ITEM

INPUT FILENAME: TOTAL11

23-AUG-90 14:52
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

STRCU MM

	UNIT WEIGHT	309.00	MODE	2
PROTOTYPE QUANTITY	6.600 UNIT VOLUME	172.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	791.	-	791.
DESIGN	3069.	-	3069.
SYSTEMS	463.	-	463.
PROJECT MGMT	982.	-	982.
DATA	246.	-	246.
SUBTOTAL(ENG)	5553.	-	5553.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	5190.	-	5190.
TOOL-TEST EQ	453.	-	453.
SUBTOTAL(MFG)	5643.	-	5643.
TOTAL COST	11196.	-	11196.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	309.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.797*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	23462*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(18)	MAR 93	(22)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

INPUT FILENAME: TOTAL11

23-AUG-90 14:52
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

POWER MM

	UNIT WEIGHT	100.00	MODE	1
PROTOTYPE QUANTITY	8.200	UNIT VOLUME	1.50	QUANTITY/NHA
				1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING	10.	-	10.
DRAFTING	43.	-	43.
DESIGN	4.	-	4.
SYSTEMS	592.	-	592.
PROJECT MGMT	85.	-	85.
DATA	734.	-	734.
SUBTOTAL (ENG)			
MANUFACTURING	-	-	-
PRODUCTION	-	-	7492.
PROTOTYPE	7492.	-	931.
TOOL-TEST EQ	931.	-	8423.
SUBTOTAL (MFG)	8423.	-	
TOTAL COST	9157.	-	9157.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	32.000*	68.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	45.333*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.810	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.050	0.050	ELECT VOL FRACTION	0.435*
DESIGN REPEAT	0.950	0.950	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	27948*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92 (28)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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23-AUG-90 14:52
(190172)

GLOBAL FILENAME:
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HARNESS MM

	UNIT WEIGHT	35.00	MODE	1
PROTOTYPE QUANTITY	7.000 UNIT VOLUME	2.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	329.	-	329.
DESIGN	1313.	-	1313.
SYSTEMS	106.	-	106.
PROJECT MGMT	229.	-	229.
DATA	56.	-	56.
SUBTOTAL (ENG)	2033.	-	2033.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1211.	-	1211.
TOOL-TEST EQ	147.	-	147.
SUBTOTAL (MFG)	1359.	-	1359.
 TOTAL COST	 3392.	 -	 3392.0

ESIGN

Q=IM*E*jT5*J*j

R*j**jT

\$\$T*

TU(\$TT*(RT*JUUMUTj

\$\$HH 5.000* 30.000 E

ENGINEERING COMPLEXITY 0.900

DENSITY 49.000 15.000*

MFG. COMPLEXITY 10.057 6.890

NEW DESIGN 0.500 0.800

DESIGN REPEAT 0.500 0.20*

eu%U

\$dHHH 2.000

HW/SW INTEG. LEVEL 0.000

INTEGRATION LEVEL 0.097 0.070

PROTOTYPE SUPPORT 1.0
PROTO SCHEDULE FACTOR 0.250*
ELECT VOL FRACTION 0.051*

YEAR OF TECHNOLOGY 1991*
RELIABILITY FACTOR 1.0
MTBF(FIELD) 172349*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92 (25)	JAN 95 (40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE 192

ESCALATION 0.00

DEV COST MULTIPLIER 1.00*

TOOLING & PROCESS FACTORS
DEVELOPMENT TOOLING 1.00*

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INPUT FILENAME: TOTAL11

23-AUG-90 14:52
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

THERMAL MM

	UNIT WEIGHT	45.00	MODE	1
PROTOTYPE QUANTITY	7.600	UNIT VOLUME	1.50	QUANTITY/NHA 1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1054.	-	1054.
DESIGN	4262.	-	4262.
SYSTEMS	409.	-	409.
PROJECT MGMT	536.	-	536.
DATA	150.	-	150.
SUBTOTAL (ENG)	6412.	-	6412.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1505.	-	1505.
TOOL-TEST EQ	185.	-	185.
SUBTOTAL (MFG)	1690.	-	1690.
TOTAL COST	8102.	-	8102.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	6.000*	39.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	26.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.800	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.950	ELECT VOL FRACTION	0.091*
DESIGN REPEAT	0.000	0.300	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	133907*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(16)	JAN 93	(24)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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MECHANICAL ITEM

INPUT FILENAME: TOTAL11

23-AUG-90 14:52
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

HS MM

	UNIT WEIGHT	421.00	MODE	2
PROTOTYPE QUANTITY	6.900 UNIT VOLUME	11.70	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	2049.	-	2049.
DESIGN	7523.	-	7523.
SYSTEMS	903.	-	903.
PROJECT MGMT	1413.	-	1413.
DATA	381.	-	381.
SUBTOTAL(ENG)	12269.	-	12269.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	6492.	-	6492.
TOOL-TEST EQ	528.	-	528.
SUBTOTAL(MFG)	7020.	-	7020.
TOTAL COST	19289.	-	19289.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	421.000	ENGINEERING COMPLEXITY	1.000
DENSITY	35.983*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	21383*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (18)	MAR 93 (22)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

INPUT FILENAME: TOTAL11

23-AUG-90 14:52
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

TTC MM

	UNIT WEIGHT	20.00	MODE	1
PROTOTYPE QUANTITY	11.700	UNIT VOLUME	3.00	QUANTITY/NHA
				1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING		-	31.
DRAFTING	31.	-	93.
DESIGN	93.	-	2.
SYSTEMS	2.	-	485.
PROJECT MGMT	485.	-	73.
DATA	73.	-	683.
SUBTOTAL(ENG)	683.	-	
MANUFACTURING		-	-
PRODUCTION	-	-	5816.
PROTOTYPE	5816.	-	405.
TOOL-TEST EQ	405.	-	6221.
SUBTOTAL(MFG)	6221.	-	
TOTAL COST	6904.	-	6904.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.000*	4.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	1.333*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.119*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	65805*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (12)	SEP 92 (28)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	191*	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

MECHANICAL ITEM

INPUT FILENAME: TOTAL11

23-AUG-90 14:52
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

ECLSS MM

UNIT WEIGHT	127.00	MODE	2
PROTOTYPE QUANTITY	7.100	UNIT VOLUME	6.00
		QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	251.	-	251.
DESIGN	912.	-	912.
SYSTEMS	94.	-	94.
PROJECT MGMT	267.	-	267.
DATA	60.	-	60.
SUBTOTAL (ENG)	1585.	-	1585.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1438.	-	1438.
TOOL-TEST EQ	104.	-	104.
SUBTOTAL (MFG)	1541.	-	1541.
TOTAL COST	3126.	-	3126.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	127.000	ENGINEERING COMPLEXITY	0.900
DENSITY	21.167*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.900	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	37694*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(13)	OCT 92	(27)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL11

23-AUG-90 14:52
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

MM LESS PM I&T

	UNIT WEIGHT	47.30	MODE	1
PROTOTYPE QUANTITY	5.000 UNIT VOLUME	2.75	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING		-	622.
DRAFTING	622.	-	2550.
DESIGN	2550.	-	239.
SYSTEMS	239.	-	342.
PROJECT MGMT	342.	-	91.
DATA	91.	-	3844.
SUBTOTAL (ENG)	3844.	-	
MANUFACTURING		-	-
PRODUCTION	-	-	1050.
PROTOTYPE	1050.	-	131.
TOOL-TEST EQ	131.	-	1182.
SUBTOTAL (MFG)	1182.	-	
TOTAL COST	5026.	-	5026.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	6.034*	41.264*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.708	7.297	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.063*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	129634*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(14)	NOV 92	(26)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL11

23-AUG-90 14:52
(190172)GLOBAL FILENAME:
ESCALATION FILENAME:

PM EXP MOD MM

PROTOTYPE QUANTITY	UNIT WEIGHT	132.00	MODE	1
	7.300 UNIT VOLUME	14.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	266.	-	266.
DESIGN	1052.	-	1052.
SYSTEMS	102.	-	102.
PROJECT MGMT	1070.	-	1070.
DATA	192.	-	192.
SUBTOTAL (ENG)	2681.	-	2681.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	17170.	-	17170.
TOOL-TEST EQ	2358.	-	2358.
SUBTOTAL (MFG)	19528.	-	19528.
TOTAL COST	22209.	-	22209.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	78.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	5.571*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.400	0.750	ELECT VOL FRACTION	0.088*
DESIGN REPEAT	0.900	0.900	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	19978*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(22)	JUL 93	(18)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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SPT MOD MM

	UNIT WEIGHT	268.00	MODE	1
PROTOTYPE QUANTITY	7.300 UNIT VOLUME	12.30	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING		-	3466.
DRAFTING	3466.	-	13480.
DESIGN	13480.	-	1344.
SYSTEMS	1344.	-	2237.
PROJECT MGMT	2237.	-	593.
DATA	593.	-	21121.
SUBTOTAL(ENG)	21121.	-	
MANUFACTURING		-	-
PRODUCTION	-	-	19474.
PROTOTYPE	19474.	-	2681.
TOOL-TEST EQ	2681.	-	22155.
SUBTOTAL(MFG)	22155.	-	
TOTAL COST	43276.	-	43276.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	54.000*	214.000	ENGINEERING COMPLEXITY	1.000
DENSITY	44.000	17.398*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.600	0.900	ELECT VOL FRACTION	0.100*
DESIGN REPEAT	0.200	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	19978*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (24)	SEP 93 (16)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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INPUT FILENAME: TOTAL11

23-AUG-90 14:53
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PM SPT MOD PRES VESSEL MM

	UNIT WEIGHT	105.00	MODE	2
PROTOTYPE QUANTITY	7.300 UNIT VOLUME	28.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	795.	-	795.
DESIGN	2968.	-	2968.
SYSTEMS	346.	-	346.
PROJECT MGMT	528.	-	528.
DATA	142.	-	142.
SUBTOTAL(ENG)	4780.	-	4780.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2013.	-	2013.
TOOL-TEST EQ	162.	-	162.
SUBTOTAL(MFG)	2174.	-	2174.
TOTAL COST	6954.	-	6954.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	105.000	ENGINEERING COMPLEXITY	1.000
DENSITY	3.750*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	32434*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(16)	JAN 93	(24)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

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23-AUG-90 14:53
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PM I&T

	UNIT WEIGHT	34.57	MODE	1
PROTOTYPE QUANTITY	5.000 UNIT VOLUME	1.53	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	891.	-	891.
DESIGN	3607.	-	3607.
SYSTEMS	343.	-	343.
PROJECT MGMT	476.	-	476.
DATA	130.	-	130.
SUBTOTAL (ENG)	5447.	-	5447.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1811.	-	1811.
TOOL-TEST EQ	235.	-	235.
SUBTOTAL (MFG)	2045.	-	2045.
TOTAL COST	7493.	-	7493.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.620*	22.951*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.071	7.363	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.217*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	75715*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93 (23)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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MM I&T W/PM

PROTOTYPE QUANTITY	UNIT WEIGHT	45.61	MODE	1
	5.000 UNIT VOLUME	2.27	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	888.	-	888.
DESIGN	3576.	-	3576.
SYSTEMS	344.	-	344.
PROJECT MGMT	474.	-	474.
DATA	130.	-	130.
SUBTOTAL (ENG)	5412.	-	5412.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1747.	-	1747.
TOOL-TEST EQ	222.	-	222.
SUBTOTAL (MFG)	1969.	-	1969.
TOTAL COST	7381.	-	7381.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.574*	34.033*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.929	7.395	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.146*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	73009*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93 (23)	JAN 95 (40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
DEV COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS	
DEVELOPMENT TOOLING	1.00*

PRICE HARDWARE MODEL
MECHANICAL ITEM

INPUT FILENAME: TOTAL11

23-AUG-90 14:53
(190172)

GLOBAL FILENAME:
ESCALATION FILENAME:

STRUCTURE DM

	UNIT WEIGHT	50.00	MODE	2
PROTOTYPE QUANTITY	5.000 UNIT VOLUME	39.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	230.	-	230.
DESIGN	914.	-	914.
SYSTEMS	132.	-	132.
PROJECT MGMT	230.	-	230.
DATA	61.	-	61.
SUBTOTAL(ENG)	1567.	-	1567.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	817.	-	817.
TOOL-TEST EQ	75.	-	75.
SUBTOTAL(MFG)	892.	-	892.
TOTAL COST	2459.	-	2459.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	50.000	ENGINEERING COMPLEXITY	1.200
DENSITY	1.282*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR	1.0
		MTBF(FIELD)	40520*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(15)	DEC 92	(25)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ELECTRONIC ITEM

INPUT FILENAME: TOTAL11

23-AUG-90 14:54
(190172)GLOBAL FILENAME:
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POWER DM

UNIT WEIGHT	210.00	MODE	1
PROTOTYPE QUANTITY	5.600	UNIT VOLUME	3.00
		QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	927.	-	927.
DESIGN	3654.	-	3654.
SYSTEMS	363.	-	363.
PROJECT MGMT	862.	-	862.
DATA	198.	-	198.
SUBTOTAL(ENG)	6003.	-	6003.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	8160.	-	8160.
TOOL-TEST EQ	1035.	-	1035.
SUBTOTAL(MFG)	9195.	-	9195.
TOTAL COST	15198.	-	15198.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	40.000*	170.000	ENGINEERING COMPLEXITY	1.000
DENSITY	49.000	56.667*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.954	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.200	ELECT VOL FRACTION	0.272*
DESIGN REPEAT	0.500	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	22458*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(20)	MAY 93	(20)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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HARNESS DM

	UNIT WEIGHT	50.00	MODE	1
PROTOTYPE QUANTITY	5.200 UNIT VOLUME	4.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	373.	-	373.
DESIGN	1487.	-	1487.
SYSTEMS	120.	-	120.
PROJECT MGMT	235.	-	235.
DATA	60.	-	60.
SUBTOTAL(ENG)	2275.	-	2275.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1031.	-	1031.
TOOL-TEST EQ	129.	-	129.
SUBTOTAL(MFG)	1160.	-	1160.
TOTAL COST	3435.	-	3435.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	45.000	ENGINEERING COMPLEXITY	0.900
DENSITY	49.000	11.250*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	6.890	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.800	ELECT VOL FRACTION	0.026*
DESIGN REPEAT	0.500	0.200	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.070	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	172349*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(15)	DEC 92	(25)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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23-AUG-90 14:54
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GLOBAL FILENAME:
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THERMAL DM

PROTOTYPE QUANTITY	UNIT WEIGHT	10.00	MODE	2
	4.100 UNIT VOLUME	0.20	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	127.	-	127.
DESIGN	483.	-	483.
SYSTEMS	56.	-	56.
PROJECT MGMT	75.	-	75.
DATA	21.	-	21.
SUBTOTAL (ENG)	762.	-	762.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	101.	-	101.
TOOL-TEST EQ	10.	-	10.
SUBTOTAL (MFG)	111.	-	111.
TOTAL COST	872.	-	872.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	10.000	ENGINEERING COMPLEXITY	1.000
DENSITY	50.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	7.200	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	80800*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (11)	AUG 92 (29)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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23-AUG-90 14:54
(190172)

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ESCALATION FILENAME:

TTC DM

	UNIT WEIGHT	39.00	MODE	1
PROTOTYPE QUANTITY	8.900 UNIT VOLUME	2.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	42.	-	42.
DESIGN	126.	-	126.
SYSTEMS	2.	-	2.
PROJECT MGMT	550.	-	550.
DATA	84.	-	84.
SUBTOTAL (ENG)	805.	-	805.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	6710.	-	6710.
TOOL-TEST EQ	470.	-	470.
SUBTOTAL (MFG)	7180.	-	7180.
TOTAL COST	7985.	-	7985.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	22.000*	17.000	ENGINEERING COMPLEXITY	0.300
DENSITY	45.000	8.500*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.705	7.767	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.200	0.200	ELECT VOL FRACTION	0.244*
DESIGN REPEAT	0.800	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.097	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	48164*

SCHEDULE	START		FIRST ITEM	FINISH
DEVELOPMENT	OCT 91	(13)	OCT 92	JAN 95
			(27)	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS
ECONOMIC BASE	192	DEVELOPMENT TOOLING
ESCALATION	0.00	1.00*
DEV COST MULTIPLIER	1.00*	

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23-AUG-90 14:54
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R SYS DM

PROTOTYPE QUANTITY	UNIT WEIGHT	150.00	MODE	1
	7.000 UNIT VOLUME	6.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	16.	-	16.
DESIGN	44.	-	44.
SYSTEMS	1.	-	1.
PROJECT MGMT	186.	-	186.
DATA	28.	-	28.
SUBTOTAL (ENG)	275.	-	275.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1684.	-	1684.
TOOL-TEST EQ	83.	-	83.
SUBTOTAL (MFG)	1767.	-	1767.
TOTAL COST	2042.	-	2042.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	145.000	ENGINEERING COMPLEXITY	0.200
DENSITY	42.000	24.167*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.050	0.200	ELECT VOL FRACTION	0.020*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.070	0.070	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	161130*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (8)	MAY 92 (32)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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PROTOTYPE QUANTITY	19.000	UNIT WEIGHT	50.00	MODE	1
		UNIT VOLUME	3.00	QUANTITY/NHA	3

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	197.	-	197.
DESIGN	711.	-	711.
SYSTEMS	33.	-	33.
PROJECT MGMT	342.	-	342.
DATA	64.	-	64.
SUBTOTAL (ENG)	1347.	-	1347.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2869.	-	2869.
TOOL-TEST EQ	262.	-	262.
SUBTOTAL (MFG)	3131.	-	3131.
TOTAL COST	4478.	-	4478.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	2.000*	48.000	ENGINEERING COMPLEXITY	0.600
DENSITY	49.000	16.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.800	0.200	ELECT VOL FRACTION	0.014*
DESIGN REPEAT	0.200	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.151	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	423050*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(12)	SEP 92	(28)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

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23-AUG-90 14:55
(190172)

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DM LESS GNC I&T

	UNIT WEIGHT	48.43	MODE	1
PROTOTYPE QUANTITY	5.000 UNIT VOLUME	2.28	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	943.	-	943.
DESIGN	3774.	-	3774.
SYSTEMS	369.	-	369.
PROJECT MGMT	504.	-	504.
DATA	139.	-	139.
SUBTOTAL (ENG)	5730.	-	5730.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1784.	-	1784.
TOOL-TEST EQ	220.	-	220.
SUBTOTAL (MFG)	2004.	-	2004.
TOTAL COST	7734.	-	7734.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	14.221*	34.208*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.743	7.422	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.178*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	56537*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93 (23)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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23-AUG-90 14:55
(190172)

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GNC CONTROL DM

PROTOTYPE QUANTITY	UNIT WEIGHT	98.00	MODE	1
	11.800 UNIT VOLUME	5.00	QUANTITY/NHA	2

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	85.	-	85.
DESIGN	309.	-	309.
SYSTEMS	19.	-	19.
PROJECT MGMT	533.	-	533.
U			
) tNG) 1033.	-	1033.	
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	6706.	-	6706.
TOOL-TEST EQ	645.	-	645.
SUBTOTAL (MFG)	7351.	-	7351.
TOTAL COST	8384.	-	8384.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS
WEIGHT	30.000*	68.000	ENGINEERING COMPLEXITY 0.700
DENSITY	44.000	13.600*	PROTOTYPE SUPPORT 1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR 0.250*
NEW DESIGN	0.200	0.150	ELECT VOL FRACTION 0.136*
DESIGN REPEAT	0.800	0.850	PLATFORM 2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY 1991*
INTEGRATION LEVEL	0.120	0.097	RELIABILITY FACTOR 1.0
			MTBF (FIELD) 27834*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93 (24)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS
ECONOMIC BASE	192	DEVELOPMENT TOOLING
ESCALATION	0.00	
DEV COST MULTIPLIER	1.00*	1.00*

ORIGINAL PANEL 12
OF POOR QUALITY

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

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GNC ANTENNA DM

	UNIT WEIGHT	1.00	MODE	1
PROTOTYPE QUANTITY	38.000 UNIT VOLUME	0.05	QUANTITY/NHA	7

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	5.	-	5.
DESIGN	16.	-	16.
SYSTEMS	0.	-	0.
PROJECT MGMT	41.	-	41.
DATA	6.	-	6.
SUBTOTAL (ENG)	70.	-	70.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	372.	-	372.
TOOL-TEST EQ	22.	-	22.
SUBTOTAL (MFG)	393.	-	393.
TOTAL COST	463.	-	463.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	0.500*	0.500	ENGINEERING COMPLEXITY	0.300
DENSITY	40.000	10.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.822	7.281	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.300	0.300	ELECT VOL FRACTION	0.250*
DESIGN REPEAT	0.700	0.700	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.097	0.120	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	1538786*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(6)	MAR 92	(34)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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GNC I&T

PROTOTYPE QUANTITY	UNIT WEIGHT	16.75	MODE	1
	8.000 UNIT VOLUME	0.37	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	606.	-	606.
DESIGN	2445.	-	2445.
SYSTEMS	238.	-	238.
PROJECT MGMT	353.	-	353.
DATA	93.	-	93.
SUBTOTAL (ENG)	3736.	-	3736.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1193.	-	1193.
TOOL-TEST EQ	132.	-	132.
SUBTOTAL (MFG)	1325.	-	1325.
TOTAL COST	5061.	-	5061.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	11.194*	5.553*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.256	6.853	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.864*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	0.350	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	61724*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (14)	NOV 92 (26)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

ORIGINAL PAGE 17
OF POOR QUALITY

- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

INPUT FILENAME: TOTAL11

23-AUG-90 14:56
(190172)

GLOBAL FILENAME:
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STRUCTURE, PROPULSION SUBMOD.

PROTOTYPE QUANTITY	UNIT WEIGHT 5.000	UNIT VOLUME 150.00	MODE 38.00	QUANTITY/NHA 2
				1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	464.	-	464.
DESIGN	1831.	-	1831.
SYSTEMS	269.	-	269.
PROJECT MGMT	509.	-	509.
DATA	131.	-	131.
SUBTOTAL (ENG)	3204.	-	3204.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2148.	-	2148.
TOOL-TEST EQ	197.	-	197.
SUBTOTAL (MFG)	2345.	-	2345.
TOTAL COST	5549.	-	5549.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS
WEIGHT	150.000	ENGINEERING COMPLEXITY 1.200
DENSITY	3.947*	PROTOTYPE SUPPORT 1.0
MFG. COMPLEXITY	7.682	PROTO SCHEDULE FACTOR 0.250*
NEW DESIGN	0.900	PLATFORM 2.000
DESIGN REPEAT	0.600	YEAR OF TECHNOLOGY 1991*
INTEGRATION LEVEL	0.151	RELIABILITY FACTOR 1.0
		MTBF (FIELD) 29143*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93 (24)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS
ECONOMIC BASE	192	DEVELOPMENT TOOLING 1.00*
ESCALATION	0.00	
DEV COST MULTIPLIER	1.00*	

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- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

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23-AUG-90 14:56
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PROPULSION DM

PROTOTYPE QUANTITY	UNIT WEIGHT	141.00	MODE	2
	4.300 UNIT VOLUME	10.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	104.	-	104.
DESIGN	398.	-	398.
SYSTEMS	42.	-	42.
PROJECT MGMT	811.	-	811.
DATA	145.	-	145.
SUBTOTAL (ENG)	1499.	-	1499.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	13988.	-	13988.
TOOL-TEST EQ	1752.	-	1752.
SUBTOTAL (MFG)	15740.	-	15740.
TOTAL COST	17239.	-	17239.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS
WEIGHT	141.000	ENGINEERING COMPLEXITY
DENSITY	14.100*	PROTOTYPE SUPPORT
MFG. COMPLEXITY	9.669	PROTO SCHEDULE FACTOR
NEW DESIGN	0.200	PLATFORM
DESIGN REPEAT	0.800	YEAR OF TECHNOLOGY
INTEGRATION LEVEL	0.097	RELIABILITY FACTOR
		MTBF (FIELD)

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (24)	SEP 93 (16)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS
ECONOMIC BASE	192	DEVELOPMENT TOOLING
ESCALATION	0.00	
DEV COST MULTIPLIER	1.00*	

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- - - PRICE HARDWARE MODEL - - -
MECHANICAL ITEM

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PROPULSION SUBMOD. I&T

PROTOTYPE QUANTITY	UNIT WEIGHT	17.78	MODE	2
	5.000 UNIT VOLUME	1.19	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	178.	-	178.
DESIGN	694.	-	694.
SYSTEMS	73.	-	73.
PROJECT MGMT	127.	-	127.
DATA	32.	-	32.
SUBTOTAL (ENG)	1104.	-	1104.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	602.	-	602.
TOOL-TEST EQ	60.	-	60.
SUBTOTAL (MFG)	661.	-	661.
TOTAL COST	1765.	-	1765.

DESIGN FACTORS	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	17.784*	ENGINEERING COMPLEXITY	1.000
DENSITY	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	8.436	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	PLATFORM	2.000
DESIGN REPEAT	0.000	YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.350	RELIABILITY FACTOR	1.0
		MTBF (FIELD)	40944*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (15)	DEC 92 (25)	JAN 95 (40)

SUPPLEMENTAL INFORMATION	TOOLING & PROCESS FACTORS
ECONOSR(@P*,HH A 192	DEVELOPMENT TOOLING
ESCALATION 0.00	1.00*
DEV COST MULTIPLIER 1.00*	

- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

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DM I&T

	UNIT WEIGHT	47.07	MODE	1
PROTOTYPE QUANTITY	5.000 UNIT VOLUME	2.05	QUANTITY/NHA	1

PROGRAM COST (\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1004.	-	1004.
DESIGN	4020.	-	4020.
SYSTEMS	394.	-	394.
PROJECT NGMT	552.	-	552.
DATA	151.	-	151.
SUBTOTAL (ENG)	6120.	-	6120.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	1899.	-	1899.
TOOL-TEST EQ	226.	-	226.
SUBTOTAL (MFG)	2125.	-	2125.
TOTAL COST	8246.	-	8246.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	16.283*	30.791*	ENGINEERING COMPLEXITY	1.000
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.546	7.938	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.500	0.500	ELECT VOL FRACTION	0.227*
DESIGN REPEAT	0.000	0.000	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	1.000	1.000	RELIABILITY FACTOR	1.0
			MTBF (FIELD)	46698*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (16)	JAN 93 (24)	JAN 95 (40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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- - - PRICE HARDWARE MODEL - - -
ELECTRONIC ITEM

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PAYLOAD ADAPTER

	UNIT WEIGHT	1000.00	MODE	1
PROTOTYPE QUANTITY	9.800 UNIT VOLUME	249.00	QUANTITY/NHA	1

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	597.	-	597.
DESIGN	2107.	-	2107.
SYSTEMS	102.	-	102.
PROJECT MGMT	1573.	-	1573.
DATA	282.	-	282.
SUBTOTAL(ENG)	4661.	-	4661.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	16551.	-	16551.
TOOL-TEST EQ	1509.	-	1509.
SUBTOTAL(MFG)	18060.	-	18060.
TOTAL COST	22721.	-	22721.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	5.000*	995.000	ENGINEERING COMPLEXITY	0.600
DENSITY	42.000	3.996*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	10.057	7.682	PROTO SCHEDULE FACTOR	0.250*
NEW DESIGN	0.950	0.200	ELECT VOL FRACTION	0.000*
DESIGN REPEAT	0.000	0.800	PLATFORM	2.000
HW/SW INTEG. LEVEL	0.000		YEAR OF TECHNOLOGY	1991*
INTEGRATION LEVEL	0.134	0.263	RELIABILITY FACTOR	1.0
			MTBF(FIELD)	172349*

SCHEDULE	START		FIRST ITEM		FINISH	
DEVELOPMENT	OCT 91	(15)	DEC 92	(25)	JAN 95	(40)

SUPPLEMENTAL INFORMATION		TOOLING & PROCESS FACTORS	
ECONOMIC BASE	192	DEVELOPMENT TOOLING	1.00*
ESCALATION	0.00		
DEV COST MULTIPLIER	1.00*		

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- - - PRICE HARDWARE MODEL - - -
INTEGRATION AND TEST

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23-AUG-90 14:57
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TOTAL SYSTEM I&T

PROTOTYPE QUANTITY	INT WEIGHT 5.000	INT VOLUME	82.197* MODE 4.184* QUANTITY/HNA	5 0
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PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	1251.	-	1251.
DESIGN	5002.	-	5002.
SYSTEMS	489.	-	489.
PROJECT MGMT	689.	-	689.
DATA	188.	-	188.
SUBTOTAL (ENG)	7620.	-	7620.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	2673.	-	2673.
TOOL-TEST EQ	327.	-	327.
SUBTOTAL (MFG)	3000.	-	3000.
TOTAL COST	10619.	-	10619.

DESIGN FACTORS	ELECTRONIC	MECHANICAL	PRODUCT DESCRIPTORS	
WEIGHT	19.430*	62.767*	ENGINEERING COMPLEXITY	1.000*
DENSITY	35.000*	15.000*	PROTOTYPE SUPPORT	1.0
MFG. COMPLEXITY	9.734*	7.658*	PROTO SCHEDULE FACTOR	0.250*
NEW PLANS LEVEL	0.500	0.500	ELECT VOL FRACTION	0.133
INTEGRATION LEVEL	0.000	0.000	PLATFORM	2.000
			YEAR OF TECHNOLOGY	1991*
			RELIABILITY FACTOR	1.0
			MTBF (FIELD)	41531*

SCHEDULE	START	FIRST ITEM	FINISH
DEVELOPMENT	OCT 91 (17)	FEB 93 (23)	JAN 95 (40)

SUPPLEMENTAL INFORMATION

ECONOMIC BASE	192
ESCALATION	0.00
AMORTIZED UNIT COST	0.00*
DEV COST MULTIPLIER	1.00*
PROD COST MULTIPLIER	1.00*

TOOLING & PROCESS FACTORS

DEVELOPMENT TOOLING	1.00*
PRODUCTION TOOLING	1.00*

- - - PRICE HARDWARE MODEL - - -
SYSTEM COST SUMMARY

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TOTAL COST, WITH INTEGRATION COST

PROGRAM COST(\$ 1000)	DEVELOPMENT	PRODUCTION	TOTAL COST
ENGINEERING			
DRAFTING	18748.	-	18748.
DESIGN	73035.	-	73035.
SYSTEMS	7437.	-	7437.
PROJ MGMT	18120.	-	18120.
DATA	4161.	-	4161.
SUBTOTAL(ENG)	121501.	-	121501.
MANUFACTURING			
PRODUCTION	-	-	-
PROTOTYPE	144826.	-	144826.
TOOL-TEST EQ	15992.	-	15992.
PURCH ITEMS	0.	-	0.
SUBTOTAL(MFG)	160818.	-	160818.
TOTAL COST	282318.	-	282318.

Restart the Program (Y/N)? N